

# The Origins of Seewen's Welte-Philharmonie

by David Rumsey and Christoph E. Haenggi

## Background



Michael Welte

The Welte Company was a German firm, first established in 1832 at Vöhrenbach (Black-Forest) by automata manufacturer Michael Welte (1807-1880). In about 1865 he moved to Freiburg/Breisgau and registered there as *M. Welte & Söhne*. During the remainder of the 19<sup>th</sup> century the firm expanded considerably and became particularly noted for its orchestrions. From 1865-1917 they also ran a branch in New York (*M. Welte & Sons*) under Emil Welte (1841-1923, eldest son of the founder) but it was closed during World War I as an "alien enterprise". Edwin Welte's sister, Frieda, married Karl Bockisch (1874-1952), who was active in the firm from 1893 onwards. He later assumed a leading role and became a partner. Welte's "Cabinet player", a reproducing piano without keyboard which bore the Mignon label, was first patented in 1904 while the firm was under the direction of Edwin Welte (1876-1958, grandson of the founder). The prototype was exhibited during late 1904 in Leipzig and became commercially available from early 1905. The *Vorsetzer* came on the market in 1908. Mignon was integrated into their upright pianos in 1909, and into their grand pianos from 1913. This rather arcane piano technology was adapted to the "Welte-Philharmonie-Orgel" (known as the "Philharmonic" in the USA). By 1909 a recording organ had been built for Welte's studios in Freiburg. The *Philharmonie* was displayed in the 1911 Turin World Exhibition in Italy commencing in the (northern hemisphere) Spring. Welte successfully went on to market player organs, cinema organs, cinema player organs and, later, when that market contracted during the 1930s, church organs. They issued punched paper roll recordings dated between 1912 and 1930 of performances by the great organists of the day and sold them with considerable commercial success.

Player organs became status symbols of the rich. They were the epitome of home entertainment in their day and, along with orchestrions, were manufactured in both Europe and the USA by a number of specialist firms. Welte instruments were installed in stately homes, palaces, schools, department stores and one was apparently even in a luxurious "house of pleasure" (the Atlantic Garden orchestrion). Apart from Europe and the USA, Welte's market is known to have extended to Turkey, Russia, China and Sumatra. The Sumatran instrument was broken up and lost in 1985.

From about 1926 Welte began to be threatened by a rapidly growing radio and recording industry. Business declined so much that in 1932 the firm only narrowly escaped bankruptcy. At about this time they were also engaged in a collaboration with the Telefunken Company involving the development of electronic organs, using analog sampling, glass plates and photo-cells. It was a prophetic development for that time. The collaboration had to be terminated because Edwin Welte's first wife, Betty Dreyfuss, was Jewish. Had Welte been successful they might well have eliminated the Hammond organ from the pages of history.

World War II finally precipitated the total demise of the firm. Apart from being black-listed

by the Nazis, the Freiburg premises - all but a few scraps of stock, instruments and historical documents - were annihilated by Allied bombing in November 1944. The ruined Welte factory was something of a landmark next to Freiburg railway station until the mid-1950s. No trace of it remains today, a housing estate replaced it.

### Time lines

1902-3

- ☛ *Olympic* and *Titanic* were first planned. Orchestrons and other mechanical musical instruments had long been available.

1908

- ☛ December 16<sup>th</sup>: *Olympic*'s keel was laid.

1909

- ☛ Welte's first *Philharmonie* recording organ was built in their Freiburg studios.
- ☛ March 31<sup>st</sup>: *Titanic*'s keel was laid.

1910

- ☛ October 20<sup>th</sup>: *Olympic* was launched.

1911

- ☛ May 31<sup>st</sup>: *Titanic* was launched; *Olympic* was delivered to White Star Line.
- ☛ November: the *Philharmonie* was publicly demonstrated at the Turin exhibition and the company's order book opened.
- ☛ November 30<sup>th</sup>: *Britannic*'s keel was laid.

1912

- ☛ 1st April: *Titanic*'s trials first were scheduled.
- ☛ 15<sup>th</sup> April: *Titanic*'s sinking.
- ☛ Work ceased on *Britannic* pending the *Titanic* inquiry, after which some changes to design were made, mainly safety items.
- ☛ Welte first made their *Philharmonie* available in a range of specific models.

1913

- ☛ Welte consolidated their organ designs, including modifications to their 1909 Freiburg recording organ, possibly on advice from Edwin Lemare (Kurt Binninger, 1987). Variant models became available in the same year, including the largest, as represented by the Seewen instrument, whose specification well matches the Freiburg recording organ of 1909. Manufacture began in earnest. This gave ample time to build *Britannic*'s organ. Since work on the ship was delayed, even more time became available.

1914

- ☛ February 26<sup>th</sup>: *Britannic* was launched and her fitting-out begun.
- ☛ July 28<sup>th</sup>: beginning of World War I.
- ☛ August: the ship became subject to requisitioning by the Admiralty; work was again "slowed".

1915

- ☛ May: mooring trials were undertaken; *Britannic* was on stand-by for military service.
- ☛ November 13<sup>th</sup>: *Britannic* was officially requisitioned as a hospital ship and fitted out accordingly.
- ☛ December 11<sup>th</sup>: *Britannic* sailed to England and entered service on 23<sup>rd</sup>.

1916

- ☛ November 21<sup>st</sup>: *Britannic* hit a German mine and sank off the Greek island of Kea (Tzia) in the Aegean Sea.

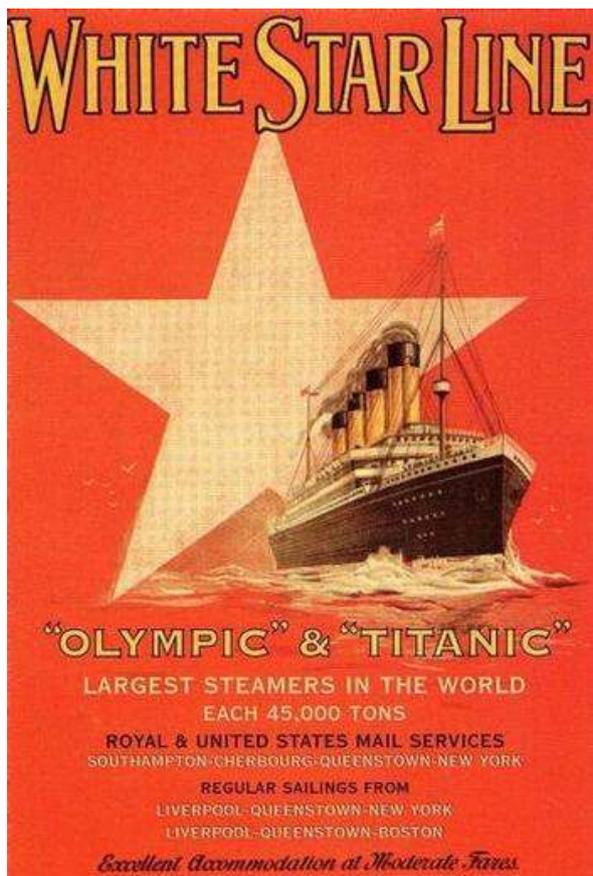
## The Seewen Britannic Organ

Until recently it was unclear exactly when the organ now preserved at the *Museum für Musikautomaten* was originally built. The museum contains a major collection dedicated to mechanical musical instruments and musical automata, and is located at Seewen, Switzerland (<http://www.landesmuseen.ch/seewen>). 1912-1920 were the considered limits since such instruments had only just come out of their development stages in 1912 and the Seewen instrument was definitely known to have existed by 1920. Internal evidence such as specification, roll formats, pipe construction, comparison with similar instruments and known availability led us to moot a dating of about 1913 as most likely.

It is a variant of Welte's "Grundmodell V-VI", having a two manual and pedal console with stop tabs, and a roll-mechanism for automatic playing. From 1920 it is well-documented. However, signposts to its pre-1920 history turned up in the course of restoration work during March 2007. In cleaning some normally unseen wooden beams around the original windchests, the word 'Britanik' was found inscribed in four places. By late May 2007, more inscriptions were found, bringing the total to six.

The console is not, or not completely original. An earlier console would naturally have been modified or even replaced in 1920 or 1937 when the organ was slightly enlarged. The present console, however, gives the impression of having re-utilized at least some of the earlier components.

## Organs aboard ships



White Star Line Publicity poster

During the mid-19<sup>th</sup> c, beginning with calliopes, keyboard musical instruments increasingly came to be featured on the river boats, yachts and ocean liners of Europe and North America. 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 vessels 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. The race for luxurious on-board musical entertainment was gradually intensified. It became a serious pursuit in the greatest luxury liners of early 20<sup>th</sup> c. 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*, aboard yachts and ships. Their New York branch installed at least one

orchestration, “operated by electric motor”, aboard the *Pocahontas*, an American river boat.

But the largest of ships’ organs was destined to be the *Britannic*’s organ. 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 well chronicled in these catalogues. The Aeolian company were also involved in ships’ organs. Documents exist showing that the *Britannic* was originally intended to have a player organ from Aeolian.

Of the White Star Line’s three great “Olympic” class ships - *Olympic*, *Titanic* and *Britannic* - there is neither evidence nor suggestion that *Olympic* ever had an organ. With the later ships, however, there are different stories to be told.

### *Titanic*

On-board entertainment was an important item in the inventory of luxuries aboard these ocean liners. *Titanic* had no less than four uprights, and one grand piano. In the light of this, oft-repeated suggestions that “an organ” was planned, built, or even installed aboard *Titanic*, cannot be ignored. There are said to be survivors’ reports of an organ which “played” (Internet Site 1 - see below). The detail is vague and the report is seriously questioned. If it has any credibility at all, then we might extract from it that “played” might suggest an orchestration aboard. It does not discredit other reports, although a second instrument aboard is highly unlikely and has never been suggested. If an organ was installed, then it now lies with the wreck and all claims of a surviving instrument “built too late” are completely errant.

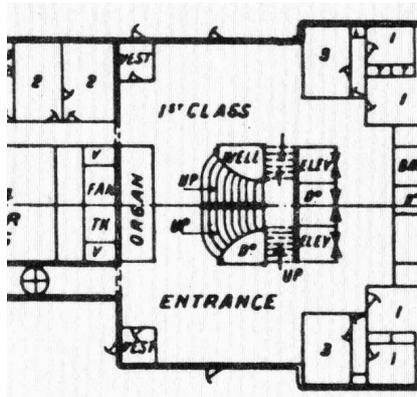
There is an interesting consistency in perpetuation of a belief that the *Titanic*’s organ was not completed in time for the voyage. A number of collections in North America and Europe possess orchestrions claimed to be “built too late to share the ship’s fate.” Certainly, if there is any element of truth in this, then it was probably an orchestration. These were available for decades before *Titanic* was conceived. The *Deutsches Musikautomatenmuseum* at Bruchsal in Germany has one. It is sometimes claimed that an undated letter from Ilse Bockisch (widow of Karl, his second wife, married in 1932) associates it with *Titanic*. The letter leaves many unanswered questions.

Suggestions have been made (Internet Site 1) that a *Philharmonie* was originally intended for *Titanic*. Welte’s *Philharmonie* was not offered for sale until some eight months after *Titanic*’s launching. A specific model was further out of the question until immediately prior to *Titanic*’s sea trials. The idea that Welte catalogue illustrations (see later) were of a *Philharmonie* organ aboard *Titanic* is thus ruled out by the time-lines. The earliest known illustration is from 1913-14, well after *Titanic*’s sinking. If there is any credibility at all here, then the only possibility was an installation after the maiden voyage.

Most evidence points against an organ or orchestration ever belonging to *Titanic*. *Olympic-Class* researchers, such as Günter Bäßler and Mark Chirnside, have looked into this matter exhaustively. Both are emphatically of that opinion.

### *Britannic*

By contrast, evidence for an organ intended for *Britannic* is overwhelming.



Britannic's plan with organ shown  
(Copy provided by Simon Mills)

There is an interesting existing reference to an Aeolian organ with two chests for music rolls in the Britannic's specification book. There is no evidence that these plans ever proceeded. Illustrations in Welte's catalogues are renderings which are so accurate that they appear to be or have been made from photographs. The firm variously identify them as "Welte-Philharmonie aboard a large English steam ship" and "Welte-Philharmonie aboard S. S. Britannic". Surviving architects' sketches, now preserved in the Ulster Folk and Transport-Museum, show exactly the same organ case in the stairwell area of *Britannic*. The ship's plans allocate this space as "ORGAN." Seewen's organ has "Britanik" inscribed in at least six places.

The dimensions of the original Seewen organ have been carefully checked against the ship's plans. It fits exactly into the space allocated.

### Time and space considerations

What was possible? Plans survive for all three ships showing their main stairwell areas. These are virtually identical except that on *Britannic* a rectangular space identified with the word "ORGAN" was added, jutting out into the stair area. Any of these three ships could easily have had this modification, but only plans for *Britannic* include it. A Philharmonie Grundmodell V-VI could have fitted into this space on any of them.

Orchestriions generally take little more ground space than an upright piano. They typically had about 260 pipes whereas a Philharmonie V-VI could have over 2,000 pipes. Orchestriions and salon organs the size of Bruchsal's (and the other *Titanic* claimants seem to be of commensurate size) could have been placed almost anywhere aboard these ships. These would not have required identification in architects' plans; detailed accommodation plans show nothing of this kind.

Even assuming for a moment that the reports of a Welte *Titanic* organ were true - which organ was too late? Certainly not one of their mass-produced instruments. Orchestriions, having been in production for years, should either have been in stock or available on very short notice. This meant that delivery of such a salon organ should have been easily achievable. It could not be entirely ruled out that delays in development of the Philharmonie might be the issue here. For what it is worth, Ilse Bockisch's letter describes a failed attempt to deliver "an organ" to *Titanic* at Southampton. Her letter leaves open too many questions to be trusted as a basis for firm conclusions in this context.

We must conclude that Jules Verne's idea was best going to be realized with *Britannic*.

### Discussion Points

A Welte catalogue of around 1914 has an illustration captioned "Welte-Philharmonie-Orgel an Bord eines grossen engl.[ischen] Dampfers" ("Welte-Philharmonie aboard a large English Steamer"). The vessel is not identified by name. The illustration is very lifelike although some background detail differs from the known architecture of the ship. Another Welte

catalogue from about this time reproduces this but now unequivocally identifies it as “WELTE-PHILHARMONIE-ORGEL auf S. S. Britannic der White Star Line” (“Welte Philharmonie on the White Star Line’s steam ship Britannic”). The architect’s sketch in the Ulster Folk and Transport Museum and the Welte illustrations show identical organ casework. These all clearly identify ship, organ, size and placement. They show the casework fully in place. Both captions expressly state that the organ was “aboard”. This suggests its presence behind the case. Since a responsible and proud firm repeated this in at least two catalogues, it can leave no doubt that the organ was a Philharmonie and that it probably was installed. No final proof either way is yet to hand.

Time-lines easily allow this. By February 1914 there was ample time to build and transport the organ. By the end of July there was also time to install and remove it. The illustrations appear to have been the property of Welte themselves, so all evidence points to the instrument being at least in preparation for, or process of installation by summer 1914.

The two-storey space near the stairs offered ideal dimensions for an organ the original size of Seewen’s *Britannic*’s Philharmonie could easily have been finished in Freiburg by late 1913 and moved to Belfast, arriving sometime between March and July 1914. We do not know whether the main staircase was installed before then. The portrayed roll player hints at a



Installation in the Seewen Museum (1).

console and possibly the wind apparatus being located underneath, with windchests and pipes on top. The apparent width of the roll in the illustration lines up well with the dimensions of Welte’s Philharmonie V-VI rolls: the paper was 390mm wide and there were flanges on either side.

Welte may well have used a hybrid pneumatic-electric action. The company are reported (Binninger 1987) to have used electric actions in “larger organs” and “where consoles were detached.” Welte had developed electro-pneumatic actions as early as 1885, one of the first

firms ever to master this technology. Arguments in favour of a fully pneumatic original action also exist. The two main manuals of the almost contemporary three-manual organ at Tunbridge Wells (see Appendix) are pneumatic. Although it is unclear until 1937, the Seewen organ does appear to have always had a hybrid action. Experts such as Peter Haggmann fully acknowledge this possibility and, having searched, can find no disproof of it.

Another photograph, from 1916, shows *Britannic* fitted out for wartime service. Explanations accompanying this photograph refer to a very basic state of furnishing - just white-painted metallic walls. Woodwork from the stairwell later appeared as collectors’ items. Stored items from the ship were publicly auctioned in Belfast in 1919 and many are still preserved in private ownership. This indicates that the internal outfitting of the ship was probably advancing at the time that possible requisitioning became an issue during August 1914.

Although the Welte catalogues show the roll-playing mechanism, no keyboard is apparent.

This might lead to a belief that this instrument was a large orchestrion. However Welte call it a Philharmonie. This specifically meant that it had a keyboard. The ship's plans unequivocally identify its space as "organ". It is instructive to compare the design with the Welte-Philharmonie at the Salomon Centre, Tunbridge Wells, England. This has pipes above and console below, flanked by pillars. The console is on the inside, screened off from the auditor. It is exactly the arrangement with Welte's organ for *Britannic*, only decorative details differ and the specifications are very similar.

### **Installation aboard *Britannic* 1914**

The overall period during which the organ could logically have been installed was February 26<sup>th</sup> to late European summer 1914. This is far more time than an installation would have required. *Britannic*'s final requisitioning theoretically allowed until November 1915 for de-installation, although Welte staff could hardly have remained or returned then. We do not yet know if anybody from Welte was in Belfast so we simply cannot say if installation was proceeding or completed before late July 1914. Welte's illustrations and captions *prima facie* support the notion that it was.

If Karl Bockisch was in Ireland for the installation, then he may have had to return quickly to Germany with the imminent outbreak of war. Edwin Welte was pursuing an extremely busy travelling schedule, especially across the Atlantic, although he was known to be "in England" (which could include Northern Ireland) at about this time. In 2005 some missing documentation that might clarify the firm's travel arrangements came into the possession of Gerhard Dangel of the Augustiner Museum, Freiburg, but it has so far proven inconclusive. There is evidence that the Welte Family travelled on the German Steamer, the Kronprinzessin Cecilie, in September 1912 (this ship also had a Welte-Mignon piano aboard), but no records have yet been found clarifying the movements of Welte employees. Since they were quite itinerant we must assume these records are now missing. Further clarification as to whether Bockisch or his team were ever in Ireland seems now dependant on finding something of this kind or from dives to the wreck planned for 2008.

Welte staff would rapidly have found themselves behind enemy lines by July 28<sup>th</sup> 1914. The inscriptions "Britanik", and ("Salomoons") in the Salomons Centre organ at Tunbridge Wells make it clear that Welte identified their clients and organs in this way, a practice already established for their pianos and pneumatic roll player devices.



Installation at Seewen (2).

### **The Period 1917-19**

There is a lack of surviving documentation that might indicate the fate of the organ between 1914 and 1919. Since *Britannic* sank in 1916, the organ could not be returned to her. After the war, in the natural course of events, ownership and other detail had to be sorted out. White Star Line - no doubt in some disarray with the loss of two of its three most prestigious ships - had no further use for it. So the instrument (with or without casework) would have been

available for sale, presumably around 1919, allowing for decisions, communications and paperwork (and possibly transportation back from Belfast).

There were negotiations between shipping company, state and insurance brokers that lasted until 1919 when final damages were paid and an auction of remaining items took place. The organ, being a part of this, would not have been available for sale until all was finalized. It probably elucidates the timing of its sale in 1920. As far as we can currently ascertain the organ was not mentioned in the inventory of items for auction in Belfast mid-1919. A Steinway piano thought to have been lost with the ship, was found after government compensation for the ship's loss had been agreed in 1917. It was then offered for sale "as Admiralty property" after which all traces of it disappear. An organ would have been even more obvious. We can only assume that the organ was not part of the compensation negotiations and therefore was either still, or once again in Welte's possession in Freiburg in 1919.

### The Period 1920 onwards



Not normally seen, inscriptions such as this show the intended original destination of the organ

Around 1920, an organ was sold by Welte to Dr. August Nagel (1882-1943) for his residence. Nagel began a highly successful camera manufacturing business in 1908 that later became the "Contessa" marque. He was a great music lover and lived in a magnificent villa in Stuttgart. In 1926 his business went to the Zeiss-Ikon concern. In 1928, he founded another camera manufacturing company that flourished in spite of hard times. This was taken over by Kodak in 1932. No photographs have yet been located of the instrument in

Nagel's possession. Indeed the apparent absence of even one photograph of this organ is curious for a camera manufacturer: one reason could be that the organ simply was not visible and had no casework to photograph (see later). It seems that the new owner had two small supplementary windchests built to accommodate some additional stops.

Nagel returned the organ to Welte in 1935 for reasons that are now unclear. In 1937, after work on it in their Freiburg workshop, Welte sold it on to Dr. Eugen Kersting (1888-1958), owner of "Radium GmbH", an electrical manufacturer. Werner Bosch (1916-92), German organ builder, worked on it as a young employee of Welte's at the time. It was installed in the Radium Company's Concert and Meeting Hall in Wipperfürth, Germany. Changes were made at Kersting's request - mainly two reed ranks added and some interesting but small concessions made to organ reform movement principles. Once again modifications to suit a client were a normal part of Welte's operation. The original Wienerflöte was replaced by a Harmonieflöte (also by Welte) and somewhat miraculously all pipes of both stops have survived. The Wienerflöte can now be returned to its proper (and original "Britannic")

configuration. There was again no sign of earlier original casework: a simple but elegant wooden grille appeared in Wipperfurth.

Towards the end of World War II, in 1945, water damage occurred as a result of bombing. The instrument survived this quite well and was offered for sale through Werner Bosch during the 1960s. No buyers were forthcoming. In 1961 it was used to make an important LP recording, issued in English-speaking circles as *Reger plays Reger*. The organ was selected as the best available for this purpose, having a specification capable of closely reproducing



Installation at Seewen (3).

organists' registrations on the original Freiburg recording organ.

By 1969, after the meeting room had been turned into a storeroom and the organ had become an encumbrance, it was to be sold for scrap. Dr. h.c. Heinrich Weiss-Stauffacher (\*1920) was informed. Weiss owned a collection of automatic musical instruments that later formed the basis of the Seewen collection. He

acquired the organ at the last minute and, in somewhat dramatic circumstances, packed and moved it carefully to its present home. There, after renovation, its re-inauguration was celebrated on 30th May 1970.

During its removal to Switzerland Bosch's experience was critical in ensuring its preservation and proper functioning. He, and Basel organ builder Bernhard Fleig, helped Weiss with the re-installation, and subsequently also its maintenance. Apart from normal wear-and-tear the organ has remained in good original condition, with few losses or changes.

### The Restoration

Years of investigation into these instruments (and submissions from experts and organ builders) began in 1998 with the Seewen organ's removal and storage while the Museum prepared for extensions. These created much needed additional space, partly to properly accommodate and display the organ.

The restoration contract was awarded to Orgelbau Kuhn, Maennedorf, in 2006. In early 2007, in the course of restoration, the "Britanik" inscriptions began to show up around the original windchests. The beams were carefully checked to see if they might have belonged to another organ. However all experts - two highly experienced organ builders, the museum director, its conservator and the organ consultant - all independently concluded that the beams and the organ were part of the same original instrument.

Very few relevant *Harland and Wolff* (shipbuilders of Belfast, Ireland) and essentially no

*Welte* records have survived. However all evidence overwhelmingly points to the *Britannic* and Seewen organs being one and the same instrument, little changed in its 90 years of existence. The *Britannic*'s pipework, windchests, console and possibly the action are all either fully original or have been only slightly modified, overwhelmingly by *Welte* themselves. The organ's 1920 and 1937 forms are fully valid *Welte* configurations, developed out of their Grundmodell V-VI. In the few cases of missing or damaged pipework, replacement has been arranged with surviving original *Welte* pipework or pipes carefully reconstructed to the firm's manufacturing methods and standards.

The Seewen/*Britannic* organ is today probably the most typical, intact and best preserved of its size and kind. So far as is currently known there is only one other Philharmonie of comparable size, Freiburg manufacture and with tonal resources capable of doing justice to the full-sized rolls (Tunbridge Wells, see Appendix below). The collection of rolls at Seewen - nearly 1,300 of them - is well in excess of any other existing collection currently known.

### **The fate of the organ's original casework**

*Welte*'s case designs are not noted for standardization, although stylistically they are mostly consistent with their epoch. Cases and organs are sometimes sold separately. No surviving organs or photos show other *Welte* instruments with casework in the style of *Britannic*'s.

*Welte* also specialized in installations in basements, attics and "adjacent rooms", the organs speaking through holes in walls or floors. This may well have been the reality with Nagel's residence and might explain a lot in this connection - e.g. the suitability of an organ on offer without a case and the absence of case photographs. Since the Philharmonie was totally enclosed in a swell-box, facade pipes, where they existed, were always "dummies".

Was the casework removed with the refit to a hospital ship? The photo of the bare-walled area can but indirectly suggest that it was not there. Simon Mills' *Britannic* Foundation, now owners of the wreck, believe that whatever was installed - probably not much - was simply covered up and left in place. Reports of Jacques Cousteau's divers who went down there in 1976 could point to the organ case still being present. They identified "an organ" and reported "metal organ pipes". The value of these reports has been questioned - indeed the rendering published by *Welte* in their catalogues hints at wooden pipes or just simple slats of wood, "pipe look-alikes". If the Cousteau report turns out to be true, then that could hint that the organ was at least partially installed when hostilities began.

An exhibition in Kiel, Germany in mid-2007 reconstructed the *Titanic*'s stairwell. Given that the three ships' designs were essentially identical here, it was clear that the organ could be installed or removed with its facade in place. Being a totally enclosed instrument the facade was purely decorative. The *Britannic* Foundation has undertaken more recent dives to the *Britannic* wreck and is currently planning another for about mid-2008 when currents are favorable. The area where the organ was to be placed will then be very closely investigated.

Effectively *Britannic*'s casework has now completely disappeared. It is either, as per the Cousteau hint, barnacle-encrusted some fathoms under the Aegean Sea, or it was destroyed, saved in an unknown location, or broken up for use in other organ facades.

### **The Motor and Blower**



The motor

Speculation of wind-raising using *Britannic*'s steam power sometimes arises (Internet Site 3). The availability of electric power, and potential evidence of a possibly original blower and electric action argue very strongly against steam. In fact steam was rarely used as motive power for organ blowing. Even then it was associated more within the period of 1812-85 than early 20<sup>th</sup> century.

An old motor and blower has survived with the organ. No dates are evident. The motor is rated at 220 volts DC and was made by Meidinger of Basel. The firm was established in the late 19<sup>th</sup> century and located not far from Welte in Freiburg. Their records only date back to about the 1960s. From its serial number, we only know that it was certainly made before then. Both motor and blower are being restored as part of the historically-conscious approach to the project. It is interesting to observe that it is rated at 220 volts DC and the ship's electric supply came from four 400 kW steam generators, each providing 100 volts DC. Expert opinion informs us that the voltage difference from running two generators in parallel - sensible electrical engineering with 2 in parallel and 2 in series - to provide 200 volts is not critical to the operation of this motor. The organ's wind supply is designed as a regulated system and virtually never needs the full amount of wind (over-) supplied by the blower. Two experts also independently estimated that the motor itself is "probably early 20<sup>th</sup> century." Thus it is just possible that this motor and/or blower could have come down from the original *Britannic* installation.

From about 1885 a growing preference for power reticulation using alternating current was beginning to overtake that of direct current. By 1913/1914 AC might normally have been the prime choice for such a motor, but the fact that the ship's supply was DC must have determined a DC motor. This further promotes the possibility that the surviving blowing installation at Seewen could have been that of *Britannic*.

-----



The restored organ as seen today in the Seewen Museum's Hall of Auditory Arts

## Appendix

### **Seewen and similar known surviving Welte-Philharmonie player organs**

Full 150-note functioning Welte player mechanisms appear to survive in no more than 10 organs world-wide. Details are scarce so only tentative information can be offered as set out below. In the September 2006 issue of *Mechanical Music*, Durward R. Center published an article entitled "Welte Orchestrions / The Age of Opulence". In it he reports that only two "fully pneumatic" organs (of an equivalent type to Seewen) still exist. Some of Welte's organs originally had hybrid pneumatic/electric actions so the field might be extended slightly in this direction without conflict to the general notion of a "Welte-Philharmonie." (The term "pneumatic organ" is sometimes used to indicate that a player mechanism was attached; cf. "pneumatic" when used to differentiate action types e.g. electric, electro-pneumatic, mechanical). Welte's Grundmodell V-VI had a basic specification of about 23/II+P (23 stops, 2 keyboards and pedals). The Freiburg recording organ after 1912-13 was about 28/II+P. A degree of discrete borrowing and extension was normal practice in all of these instruments (and less "discrete" in smaller organs and orchestrions). As far as we are aware, however, of Welte's full-sized (with 150-note tracker bars) roll-playing organs left in the world today, only about 8 seem to be of original Freiburg manufacture.

### Seewen

\* The Seewen basic specification after 1937 is 37/II+P. (With retention of both Harmonieflöte and Wienerflöte the 2007 specification became 38/II+P). This includes extended and borrowed ranks normal to Welte practice. Stop-nomenclature is German, the

stop-tabs are uniform and fit comfortably across the top of the keys, although some of the new stops added have been placed out of sequence to the right of the earlier stop-tabs. This suggests that the basic console dates from earlier and was only modified in 1937. A collection of about 1,300 rolls is associated with this organ. Organists include Harry Goss-Custard (150 rolls), Edwin Lemare (87), J. J. Nater (84), Paul Mania (76), Kurt Grosse (58), Alfred Hollins (47), Joseph Bonnet (44), William Wolstenholme (39), Walter Fischer (37), Eugène Gigout (35), Thaddäus Hofmiller (31), Herbert Walton (30), William Faulkes (29), Samuel A. Baldwin (26), Karl Matthaei (17), Clarence Eddy (20), Franz Joseph Breitenbach (16), Alfred Sittard (15), Marco Enrico Bossi (12), Paul Hindermann (13), Max Reger (11), Marie-Joseph Erb (11), Karl Straube (7), Marcel Dupré (7), and Günter Ramin (8) amongst others.

### Tunbridge Wells

\* Residence of David Salomon, Salomon Centre, Tunbridge Wells, England. This organ also dates from c1913/14 and is virtually a twin to that at Seewen. The basic specification is 27/II+Ped, pneumatic player, pneumatic action. It has, however, a third manual, an Echo division of 5 stops (remotely-placed with electric action) bringing it to 32/III+P. Extended and borrowed ranks normal to Welte practice also exist here. A most valuable survivor, its basic specification includes the full *Philharmonie Grundmodell V-VI* stops, with resources that sometimes differ slightly from Seewen's. Apart from the Echo-division the percussion accessories in particular show some variance, e.g. "tubular bells" in place of Seewen's "Harfe" and "Glocke" registers. The console was required, as per the contract, to be modelled on English systems - pistons rather than fixed combinations, manual compasses reaching to 61 notes instead of 58, stop-knobs rather than rocker-tabs and the stop-nomenclature is entirely English. There is no crescendo pedal. Even so, the general size and layout is remarkably similar to Seewen's. It plays rolls of 2 sizes, accepting also the Welte # 10 orchestrion rolls, the largest orchestrion rolls Welte ever made, and is apparently the only player for them still functioning. A collection of about 150 full-sized *Philharmonie* rolls is associated with this organ. See web-site: <http://www.maesto.com/US/welteinstruments.html>

\* a 25/II+P Welte-Philharmonie, from a collection which belonged to Jens Carlson, is now in the Mechanical Musical Instrument Museum at Elm, Germany (Stiftung Museum mechanischer Musikinstrumente Königsutter am Elm).

\* formerly at Linz am Rhein, Germany. Also a smaller *Philharmonie* organ than Seewen, 21/II+P, recently moved to the USA. This organ was used for an EMI CD recording set issued as 7243 5 74866 2 0. It was built in 1925 for the Villa of Lady Burton of England in Cap de Antibes, southern France. Horst King und Sohn restored it for the Linz Museum in 1984/85. Laukhuff of Weikersheim delivered a purely decorative case for it.

\* *Siegfrieds Mechanisches Musikkabinett, Rüdeshheim, Deutschland*. The console has the Freiburg firm's nameplate attached. Two of Wendel's publications give "around 1922" as its date of construction. 21/II+P with "Harfe und Glocken". Currently "partially restored".

\* *Deutsches Musikautomatenmuseum* at Bruchsal (in the "Welte-Saal.") As well as the so-called *Titanic* organ there is a 20/II+P Welte-Philharmonie dating from 1924 in this collection. See their web-site: <http://www.landesmuseum.de/website/>

\* The Schloss Meggenhorn instrument near Luzern in Switzerland. 19/II+P (with borrowing

and extension) probably built 1915-20. An associated roll collection of 104 items features Max Reger, Karl Matthaei, Eugène Gigout, Marcel Dupré and others. The instrument was restored by Orgelbau Kuhn.

[http://www.orgelbau.ch/site/index.cfm?fuseaction=orgelbau.orgelportrait&laufnummer=800780&id\\_art=1193&actMenuItemID=10441&vsprache=DE](http://www.orgelbau.ch/site/index.cfm?fuseaction=orgelbau.orgelportrait&laufnummer=800780&id_art=1193&actMenuItemID=10441&vsprache=DE)

\* Tuxedo Park, New York (also made in the USA), at the Spedden residence. Members of the Spedden family were survivors of the *Titanic*. The organ is still in its original location. It was recently restored by the Kegg Organ Company. 15/II+P of Freiburg manufacture. Year of manufacture is not known at this stage.

#### Other, related installations (excluding cinema organs):

\* An interesting player organ exists at the former Krupp Residence in Essen/Germany at Villa Hügel (now a museum and concert venue). It began as an American Aeolian organ with 9/II+P. In 1914 an Aeolian player mechanism was added. 1921 and 1928 saw the instrument enlarged to 14 stops by Welte with one of their player mechanisms substituted for that of Aeolian. It was restored in 2003 by Orgelbau Klais of Bonn. Associated with it is a collection of about 110 usable rolls recorded by Ramin, Straube, Sittard, Mania, Lemare and Reger - a repertoire surveying Bach, Beethoven, Brahms, Chopin, Gluck, Händel, Haydn, Liszt, Mozart, Mendelssohn, Reger, Schubert and Wagner. Five rolls are of popular music. These appear to duplicate many rolls in the Seewen collection, as would be expected, bearing in mind the Welte catalogue marketing system. Orgelbau Klais web-site has details:

<http://www.orgelbau-klais.com/m.php?tx=52>

\* A Welte player mechanism - also a 150-note tracker bar - was added in 1931 to the Willis organ at Blenheim, England. There appears to be an associated collection of some 80 remaining rolls, said to be of English organists.

\* *Technik Museum Speyer*, Germany. 36/III+P manufactured in the USA. Dating from 1916 it must have been one of the last instruments, and the largest, built there before Welte's New York branch in Poughkeepsie was closed down. Renovated in 2001. A collection of over 600 rolls is associated with it. See <http://www.museumspeyer.de/>.

\* An organ under restoration (2006) for the Swiss dealer Hanspeter Kyburz by organ-builder Remi Steis of Germany. It is also of US manufacture. It additionally bears a "W. W. Kimball" Company reference underneath Welte's on its nameplate. It is a II+P organ with much extension and borrowing somewhat reminiscent of cinema organ practice.

\* A Welte-Philharmonic of 9 ranks built pre-1926 in the studio of Barker Bros.' department store in Los Angeles then variously in the possession of Anita Baldwin, South Pasadena Masonic Lodge (1930) and Kyle B. Irwin (1999). Apparently of US manufacture with much extension and borrowing. Barker Bros. eventually owned a total of 4 Weltes.

## Bibliography/Sources

- Christian Amrhein: *Die Titanic-Organ in Bruchsal* in Titanic Post 40, June 2002, p30ff.
- Nelson Barden: *Edwin H. Lemare*, The American Organist 1986, Vol. 20. Nos. 1, 3, 6, 8.
- Kurt Binninger: *Die Welte-Philharmonie-Organ* Acta Organologica, Band 19 (1987).
- Rudolf Bruhin: *Expertenbericht*, Basel 2001.
- [CD Recording]: EMI 5CD set 7243 5 74866 2 0 CD 2 (Reger amongst others, recorded off the Welte organ in Linz am Rhein, Germany).
- Durward R. Center: *Welte Orchestrion /The Age of Opulence*, Mechanical Music, Volume 52 September/October 2006 p6ff.
- Mark Chirnside: *The 'Olympic' Class Ships: Olympic, Titanic & Britannic*, 2004, p271.
- Commutator (Titanic Historical Society's Journal) Volume 25, Number 155. 2001.
- Gerhard Dangel: *Automatische Musikinstrumente – Aus Freiburg in die Welt 100 Jahre Welte-Mignon*, Freiburg 2005.
- Peter Donhauser: *Edwin Weltes Lichtton-Organ*, Das Mechanische Musikinstrument, Vol. 97, December 2006.
- Jacob Gerssen: *Ein Geschenk für S. H. den Sultan im Jahre 1897*, Das Mechanische Musikinstrument, Vol 70, December 1997.
- Gesellschaft für Mechanische Musikinstrumente (publishers): *Musik-Museum Burg Linz am Rhein, Katalog der Sammlung K. Fischer*, o.O. (Groß-Gerau), First Edition 1986.
- Peter Hagmann: *Das Welte-Mignon-Klavier, die Welte-Philharmonie-Organ und die Anfänge der Reproduktion von Musik*, Bern 1984.
- Werner König: *Expertenbericht*, Bergen 2000.
- Orgelbau Kuhn AG: *Bericht zur Welte-Philharmonie-Organ*, Männedorf 1998 (unpublished).
- [LP Recording]: *Max Reger spielt eigene Organwerke* issued by the Electrola Co. of Cologne, Germany (1961: 1C 053-28925) on the Welte organ in Wipperfürth before it was moved to Seewen.
- David Rumsey: *Database of Seewen Organ Rolls*, Seewen 2002 (unpublished).
- David Rumsey: *Organists on a roll - the Welte organ's mechanically-recorded performances*, Conference Paper Arizona 2002 (published by GOART, Göteborg, Sweden).

David Rumsey: *Reger und die Aufführungspraxis seiner Zeit - die Welte-Aufnahmen u.a. Regers aus der Sammlung des Museums für Musikautomaten Seewen (Solothurn, Schweiz).*, Referat gelesen an den Internationalen Reger-Tagen, Bruckner-Universität, Linz, Österreich, Mittwoch 13. April 2005. / *Reger and the Performance Practice of his Era - the Welte recordings, including Reger's own, from the collection at the Museum für Musikautomaten, Seewen (Switzerland)* paper given at the International Reger Symposium, Bruckner University, Linz, Austria, Wednesday 13th April 2005. Published in German only in Querstand II (2006/7), house journal of the Anton Bruckner University, Linz, Austria. Also available in German or English at [www.davidrumsey.ch](http://www.davidrumsey.ch).

Heinrich Weiss: *Früh biegt sich, was ein Haken werden will* Basel, F. Reinhardt, 1998.

Heinrich Weiss: *Die Welte-Philharmonie-Orgel der Sammlung Heinrich Weiss-Stauffacher in Seewen SO*, Einweihung der Orgel 30. Mai 1970, Seewen 1970.

Heinrich Weiss und Rudolf Bruhin: *Musikautomaten und mechanische Musikinstrumente*, Zürich 1975.

Siegfried Wendel: *Das mechanische Musikkabinett*, Dortmund 1983, 2<sup>nd</sup> edition, Dortmund 1984.

Siegfried Wendel: *Datenspeicher-Musikinstrumente – Siegfried's Mechanisches Musikkabinett, Rüdesheim am Rhein*, Rüdesheim 2002.

### Internet

- 1: [http://www.titanicverein.de/geschichte\\_deutsch\\_zulieferer.html](http://www.titanicverein.de/geschichte_deutsch_zulieferer.html)
- 2: [http://www.hospitalshipbritannic.com/rms\\_adeck.htm](http://www.hospitalshipbritannic.com/rms_adeck.htm)
- 3: <http://www.encyclopedia-titanica.org/discus/messages/15663/79968.html?1108617567>  
(especially contributors Nicolas Roughol and Brian R Peterson)

### Acknowledgements

The authors express their gratitude for the many personal telephone, verbal and e-mail communications received. Special mention is made of

Günter Bähler, Titanic-Verein Schweiz (<http://www.titanicverein.ch>)

Andrew Baghurst, Adelaide, Australia

Nelson Barden, Boston, USA (<http://www.nbarden.com/>)

Durward R. Center, Baltimore, USA

Mark Chirnside, Warwickshire, England ([www.markchirnside.co.uk](http://www.markchirnside.co.uk))

Gerhard Dangel, Augustiner-Museum Freiburg, Deutschland

Malte Fiebing, Titanic-Verein Deutschland (<http://www.titanicverein.de>)

Brooke Green, Tasmania

Bernhard Häberle, Gesellschaft für Selbstspielende Musikinstrumente, Germany

Georg Hofmeier und Gesellschaft des Museums für Musikautomaten, Seewen (GMS)

Philipp Klais, Orgelbau Klais, Bonn, Germany

Brett Leighton, Linz, Austria

Ken Marschall (<http://www.kenmarschall.com>)

Michail Michailakis, Greece

Simon Mills (Britannic Foundation) England (<http://www.thebritannicfoundation.org.uk/>)  
Bernhard Prisi, Seewen, Switzerland  
Wolfgang Rehn and Ueli Schärer, Orgelbau Kuhn, Maennedorf, Switzerland  
Rico A. Reinle, Münchenstein, Switzerland  
Elizabeth Rumsey, Basel, Switzerland  
Heinrich Weiss and Susanne Weiss, Seewen and Basel, Switzerland  
Matthias Wunderlich, Essen, Germany

© 2007/8 David Rumsey and Christoph E. Haenggi.

(Revision of 11<sup>th</sup> October, 2011)