Zytglogge

The Zytglogge (Bernese German : / ?t ? sit?kl?k?? /) tower is a landmark medieval tower in Bern , Switzerland . Built in the early 13th century , it has served the city as guard tower , prison , clock tower , centre of urban life and civic memorial .

Despite the many redecorations and renovations it has undergone in its 800 years of existence , the Zytglogge is one of Bern 's most recognisable symbols and , with its 15th @-@ century astronomical clock , a major tourist attraction . It is a heritage site of national significance , and part of the Old City of Bern , a UNESCO World Cultural Heritage site .

History

When it was built around 1218 ? 20 , the Zytglogge served as the gate tower of Bern 's western fortifications . These were erected after the city 's first westward expansion following its de facto independence from the Empire . At that time , the Zytglogge was a squat building of only 16 metres (52 ft) in height . When the rapid growth of the city and the further expansion of the fortifications (up to the Käfigturm) relegated the tower to second @-@ line status at around 1270 ? 75 , it was heightened by 7 metres (23 ft) to overlook the surrounding houses .

Only after the city 's western defences were extended again in 1344 ? 46 up to the now @-@ destroyed Christoffelturm , the Zytglogge was converted to a women 's prison , notably housing Pfaffendirnen ? " priests ' whores " , women convicted of sexual relations with clerics . At this time , the Zytglogge also received its first slanted roof .

In the great fire of 1405 , the tower burnt out completely . It suffered severe structural damage that required thorough repairs , which were not complete until after the last restoration in 1983 . The prison cells were abandoned and a clock was first installed above the gate in the early 15th century , probably including a simple astronomical clock and musical mechanism . This clock , together with the great bell cast in 1405 , gave the Zytglogge its name , which in Bernese German means " time bell " .

In the late 15th century , the Zytglogge and the other Bernese gate towers were extended and decorated after the Burgundian Romantic fashion . The Zytglogge received a new lantern (including the metal bellman visible today) , four decorative corner towerlets , heraldic decorations and probably its stair tower . The astronomical clock was extended to its current state . In 1527 ? 30 , the clockwork was completely rebuilt by Kaspar Brunner , and the gateway was overarched to provide a secure foundation for the heavy machinery .

The Zytglogge 's exterior was repainted by Gotthard Ringgli and Kaspar Haldenstein in 1607 ? 10 , who introduced the large clock faces that now dominate the east and west façades of the tower . The corner towerlets were removed again some time before 1603 . In 1770 ? 71 , the Zytglogge was renovated by Niklaus Hebler and Ludwig Emanuel Zehnder , who refurbished the structure in order to suit the tastes of the late Baroque , giving the tower its contemporary outline .

Both façades were again repainted in the Rococo style by Rudolf von Steiger in 1890 . The idealising historicism of the design came to be disliked in the 20th century , and a 1929 competition produced the façade designs visible today : on the west façade , Victor Surbek 's fresco " Beginning of Time " and on the east façade , a reconstruction of the 1770 design by Kurt Indermühle . In 1981 ? 83 , the Zytglogge was thoroughly renovated again and generally restored to its 1770 appearance . In the advent season and from Easter until the end of October , it is illuminated after dusk .

Name

The Bernese German Zytglogge translates to Zeitglocke in Standard German and to time bell in English ; ' Glocke ' means ' bell ' in German , as in the related term ' glockenspiel ' . A " time bell " was one of the earliest public timekeeping devices , consisting of a clockwork connected to a hammer that rang a small bell at the full hour . Such a device was installed in the Wendelstein in Bern ? the tower of the Leutkirche church which the Münster later replaced ? in 1383 at the latest ; it

alerted the bell @-@ ringer to ring the tower bells .

The name of Zytglogge was first recorded in 1413 . Previously , the tower was referred to as the kebie (" cage " , i.e. , prison) and after its post @-@ 1405 reconstruction , the nüwer turm (" new tower ") .

= = Exterior = =

= = = External structure = = =

The Zytglogge has an overall height of 54 @.@ 5 metres (179 ft) , and a height of 24 metres (79 ft) up to the roof @-@ edge . Its rectangular floor plan measures 11 @.@ 2 by 10 @.@ 75 metres (36 @.@ 7 by 35 @.@ 3 ft) . The wall strengths vary widely , ranging from 260 centimetres (100 in) in the west , where the tower formed part of the city walls , to 65 centimetres (26 in) in the east .

The outward appearance of the Zytglogge is determined by the 1770 renovation . Only the late Gothic cornice below the roof and the stair tower are visible artifacts of the tower 's earlier history .

The main body of the tower is divided into the two @-@ storey plinth , whose exterior is made of alpine limestone , and the three @-@ storey tower shaft sheathed in sandstone . The shaft 's seemingly massive corner blocks are decorative fixtures held in place by visible iron hooks . Below the roof , the cornice spans around the still @-@ visible bases of the former corner towerlets . The two @-@ story attic is covered by the sweeping , red @-@ tiled , late Gothic spire , in which two spire lights are set to the West and East . They are crowned by ornamental urns with pinecone knobs reconstructed in 1983 from 18th @-@ century drawings .

From atop the spire , the wooden pinnacle , copper @-@ sheathed since 1930 , rises an additional 15 metres (49 ft) into the skies , crowned with a gilded knob and a weather vane displaying a cut @-@ out coat of arms of Bern .

= = = Bells and bell @-@ striker = = =

The tower 's two namesake bronze bells hang in the cupola at its very top .

The great hour bell , cast by Johann Reber , has remained unchanged since the tower 's reconstruction in 1405 . It has a diameter of 127 centimetres (50 in) , a weight of 1 @,@ 400 kilograms (3 @,@ 100 lb) and rings with a nominal tone of e ' . The inscription on the bell reads , in Latin : In the October month of the year 1405 I was cast by Master John called Reber of Aarau . I am vessel and wax , and to all I tell the hours of the day .

When the great bell rings out every full hour , struck by a large clockwork @-@ operated hammer , passers @-@ by see a gilded figure in full harness moving its arm to strike it . The larger @-@ than @-@ life figure of bearded Chronos , the Greek personification of time , is traditionally nicknamed Hans von Thann by the Bernese . The wooden bell @-@ striker , which has been replaced several times , has been a fixture of the Zytglogge since the renewal of the astronomical clock in 1530 , whose clockwork also controls the figure 's motions . The original wooden Chronos might have been created by master craftsman Albrecht von Nürnberg , while the current and most recent Hans is a 1930 reconstruction of a Baroque original . The bell @-@ striker has been gilded , just like the bells , since 1770 .

Below the hour bell hangs the smaller quarter @-@ hour bell , also rung by a clockwork hammer . It was cast in 1887 to replace the cracked 1486 original .

= = = Clock faces and façade decorations = = =

Both principal façades , East and West , are dominated by massive clockfaces . The Zytglogge 's first clockface was likely located on the plinth , but was moved up to the center of the shaft during the tower 's 15th @-@ century reconfiguration .

The eastern clock face features an outer ring of large golden Roman numerals , on which the larger

hand indicates the hour , and an inner ring on which the smaller hand indicates the minutes . The golden sun on the hour hand is pivot @-@ mounted so that it always faces up . Below the clock face one sees an idealised profile of city founder Duke Berchtold V of Zähringen . While the exact decoration of the clockface has varied from renovation to renovation , the current (post @-@ 1983) layout is generally that of 1770 .

The western clock face has similar hands , but is an integral part of Victor Surbek 's 1929 fresco " Beginning of Time " . The painting depicts Chronos swooping down with cape fluttering , and , below the clockface , Adam and Eve 's eviction from Paradise by an angel .

= = = Astronomical clock = = =

The dial of the Zytglogge 's astronomical clock is built in the form of an astrolabe . It is backed by a stereographically projected planisphere divided into three zones : the black night sky , the deep blue zone of dawn and the light blue day sky . The skies are crisscrossed with the golden lines of the horizon , dawn , the tropics and the temporal hours , which divide the time of daylight into twelve hours whose length varies with the time of year .

Around the planisphere moves the rete , a web @-@ like metal cutout representing the zodiac , which also features a Julian calendar dial . Above the rete , a display indicates the day of the week . Because leap days are not supported by the clockwork , the calendar hand has to be reset manually each leap year on 29 February . A moon dial circles the inner ring of the zodiac , displaying the moon phase . The principal hand of the clock indicates the time of day on the outer ring of 24 golden Roman numerals , which run twice from I to XII . It features two suns , the smaller one indicating the date on the rete 's calendar dial . The larger one circles the zodiac at one revolution per year and also rotates across the planisphere once per day . Its crossing of the horizon and dawn lines twice per day allows the timing of sunrise , dawn , dusk and sunset .

The painted frieze above the astronomical clock shows five deities from classical antiquity , each representing both a day of the week and a planet in their order according to Ptolemaic cosmology . From left to right , they are : Saturn with sickle and club for Saturday , Jupiter with thunderbolts for Thursday , Mars with sword and shield for Tuesday , Venus with Cupid for Friday and Mercury with staff and bag for Wednesday . The painting of the entire clock area was refurbished in 1983 . Only the matte areas on the clock face are from the earlier coat of paint .

= = Movement = =

The clock dial has been dated to either the building phases of 1405 or 1467 @-@ 83 , or to the installation of the Brunner clockwork in 1527 @-@ 30 . Ueli Bellwald notes that the planisphere uses a southern projection , as was characteristic for 15th @-@ century astronomical clocks ; all later such clocks use a northern projection . This would seem to confirm the dating of the clock to the 1405 or 1467 / 83 renovations .

A clock is documented in this tower since 1405 , when a new bell was installed . The city accounts of 1438 mention the repair of the clockworks . The first mention of a dial is in 1443 , and the first known image of the , much smaller first astrolabium dial (in the diary a cobbler journeyman from Ulm) is dated 1534 . The jacquemart (bellstriker) is also documented in the same 1534 source . In the first two decades of the sixteenth century many craftsman unsuccessfully tried to improve the clockworks . The current movement was made in 1530 by clockmaker Kasper Bruner and is dated and signed by a forged nameplate . No other clockworks by this master are known . The core of the movement was forged in @-@ situ , in the very room it is still located , and the fire pit of the forge remains in the room . One of the more unusual features of the movement is that each individual tooth of the major gears is removable (i.e.replaceable as it wears) . Originally the movement had a verge escapement with a foliot , as it was built 127 years before the pendulum clock was invented . The Zytglogge movement was converted to a much more accurate pendulum mechanism by the French clockmaker Pierre Angely between 1686 and 1688 . The current pendulum bob , a " recycled " iron cannonball , possibly dates from that time . The pendulum suspension is made from leather

rather than using a metal spring . The weight @-@ driven movement is wound daily by hand . That task , a role known as the " Zytgloggenrichter " , has been held for over 25 years by the same individual .

= = Interior = =

The Zytglogge 's internal layout has changed over time to reflect the tower 's change of purpose from guard tower to city prison to clock tower . The thirteenth @-@ century guard tower was not much more than a hollow shell of walls that was open towards the city in the east . Only in the fourteenth century was a layer of four storeys inserted .

The rooms above the clockwork mechanism were used by the city administration for various purposes up until the late 20th century , including as archives , storerooms , as a firehose magazine and even as an air raid shelter . The interior was frequently remodelled in a careless , even vandalistic fashion ; for instance , all but three of the original wooden beams supporting the intermediate floors were destroyed . Since 1979 , the tower 's interior is empty again . It is only accessed for maintenance and in the course of regular guided tours .