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Publisher: FeDOA Press- Centro di Ateneo per le Biblioteche dell'Università di Napoli Federico II  
Registered in Italy

Publication details, including instructions for authors and subscription information:  
<http://www.serena.unina.it/index.php/eikonocity/index>

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## The Anglo-Saxon Preference toward High-rise Buildings inspired by Italian Medieval Towers between the 19th and 20th Centuries

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To cite this article: Kawamura, E. (2021). *The Anglo-Saxon Preference toward High-rise Buildings inspired by Italian Medieval Towers between the 19th and 20th Centuries*: Eikonocity, 2021, anno VI, n. 1, 73-86, DOI: 10.6093/2499-1422/7573

To link to this article: <http://dx.doi.org/10.6093/2499-1422/7573>

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# The Anglo-Saxon Preference toward High-rise Buildings inspired by Italian Medieval Towers between the 19th and 20th Centuries

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## Abstract

Between the 19th and 20th centuries, the architecture of city halls often chose to incorporate a tower, as a symbol of administrative power, while towers of commercial buildings indicated financial power. Fire stations had a tower suitable for watching over the city and railway stations or universities had clock towers. Anglo-Saxon architects designed towers inspired by Italian medieval examples, while many British shafts and chimneys imitated Italian bell towers and the first American skyscrapers were also inspired by the aforementioned Italian towers.

## La moda anglo-sassone degli edifici alti ispirata alle torri medievali italiane tra il XIX e il XX secolo

Tra il XIX e XX secolo, l'architettura anglosassone dei municipi scelse spesso di dotarsi di una torre, come simbolo del potere amministrativo, mentre la torre degli edifici commerciali indicava il potere finanziario. Le caserme dei vigili del fuoco avevano una torre adatta a sorvegliare la città e le stazioni ferroviarie o le università erano dotate di una torre con orologio. Gli architetti progettavano torri ad imitazione di quelle medievali italiane, mentre molte ciminiere industriali britanniche ricordavano i campanili italiani. Negli Stati Uniti anche i primi grattacieli furono ispirati alle torri italiane.

**Keywords:** Tower, Campanile, Skyscraper, Italianate Architecture.

Torre, campanile, grattacielo, stile italianeggiante.

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Received January 5, 2021; accepted March 13, 2021

## 1 | Introduction

From the second half of the 19th century, many public buildings were designed to exceed the height of other buildings in order to demonstrate a certain power, for example, administrative power for city halls and financial power for commercial buildings and so on, therefore these types of architecture were often accompanied by a lofty tower, eventually taking the form of a high-rise building or even a skyscraper.

It was very suitable to reference the design of Italian medieval 'campanile' towers for these types of building, especially outside of Italy, because Italy was one of the most desirable travel destinations, and Italian medieval design was also valued due to the popularity of gothic revival architecture, especially in Germany, Britain, and United States.

So, browsing some significant books on Italian medieval architecture published in the 19th century and extracting as many examples as possible of buildings modelled on famous Italian campaniles, and from the principal German, British, and American architectural magazines of that time such as *The Builder*, *American Architect and Building News*, *The Architect*, *The Architectural Review* and *American Builders' Journal*, *The Architectural Review*, *Allgemeine Bauzeitung*, *Deutsche Bauzeitung*, etc., could be a way of substantiating this preference and tendency, according to the periods, the nationalities, the types of campanile as a model resource and the types of building to which it was applied, resulting from this worship of Italianate architecture focused on the campanile-style tower.

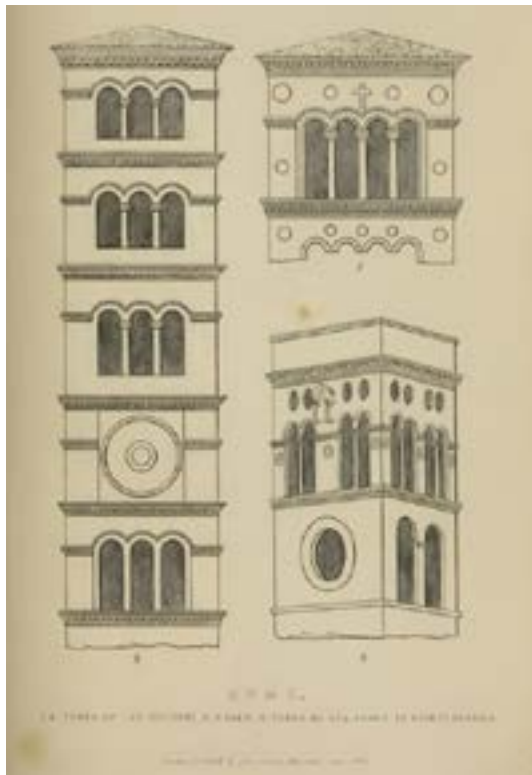


Fig. 1: Two bell towers of the Basilica of Saints John and Paul, and one of the Basilica di Santa Croce in Gerusalemme in Rome (Hope 1835, plate 42).

Fig. 2: Engraving of the Osborne House (Godwin 1850).



## 2 | Examples inspired by Tuscan and Veronese medieval towers

The publication of the Amsterdam-born British architect Thomas Hope (1769-1831) *An Historical Essay on Architecture by the late Thomas Hope, illustrated from Drawings made by him in Italy and Germany* (2 vols, 1835) presented three Roman medieval rectangular bell towers: two are from the Basilica of Saints John and Paul on the Caelian Hill (Basilica dei Santi Giovanni e Paolo al Celio) and the other one is from the Basilica of the Holy Cross in Jerusalem (Basilica di Santa Croce in Gerusalemme) [Hope 1835, plate 42].

The simple Early Christian Roman motif of these bell towers was reproduced in the three 19th century churches in Potsdam designed by the Prussian court architect Ludwig Persius (1803-1845): the Redeemer of Sacrow (Heilandskirche, 1845), the Church of Peace (Friedenskirche, 1854) and Bornstedt Church (Dorfkirche Bornstedt, 1856) [Maglio 2009, 124]. Furthermore, in Switzerland, Zurich's Catholic Liebfrauen Church (1894, A. Hardegger) has this type of design applied to its bell tower. These cases were probably also influenced by the book of Christian Bunsen (1791-1860) on Roman medieval churches: *Die Basiliken des christlichen Roms* (1824) with the collaboration of two German architects living in Rome: Johann Gottfried Gutensohn (1792-1851) and Johann Michael Knapp (1791-1861).

Above all else in Potsdam, Persius had already created in 1835 the Villa Jacobs, a Tuscan style villa with a tower so-called Turmvilla before the aforementioned church with an Italian medieval-style bell tower [Meinecke 2007, 58]. Furthermore in Potsdam, Persius designed in 1843 another Turmvilla, Villa Schöningen, which was built for Kurd von Schöning, a Prussian major

general [Ludwig Persius 2003, 46-49]. The Turmvilla trend in Potsdam continued until the 1870s, with various architects working on it, including the Villa von Haacke (1847, Ferdinand von Arnim), Schloss Dahwitz (1856, Friedrich Hitzig), and others.

On the other hand, in England, there are some examples of Italianate Romanesque churches built in the 1840s, with façades resembling the Veronese 14th century church San Zeno. They include the Christ Church in London-Streatham (1841, J.W. Wild) designed in 1852 by the same architect as the Dock Tower in Grimsby (North East Lincolnshire), which resembled a Tuscan medieval tower. The St Mary and St Nicholas of Wilton (Wiltshire) (1843, T.H. Wyatt & D. Brandon) and the Prussian Roman Catholic church, St. Peter und Paul Kirche in Potsdam (1870, W. Salzenberg) were also typical examples inspired by the Veronese San Zeno.

In 1845-51, under the direction of Thomas Cubitt (1788-1855), Osbourne House, the Victorian royal residence on the Isle of Wight, was erected with two Italianate campaniles at the request of the German Prince Albert. In the same year as its completion, a guide book reported this with great pride: «It now presents an extended facade with a very lofty campanile on one side, of the Italian palazzo style, very sparingly enriched» [Knight 1851, 21]. It was significant that the magazine editor of *The Builder*, George Godwin (1813-1888), commenced his illustrated volume *Buildings and Monuments, Modern and Medieval* (1850) with an article on this building and an engraving of it. Certainly, it reflected the particular interest in medieval Italian architecture with campaniles among British architects.

Soon after this, other buildings were embellished with a campanile like that of Osbourne House, including the Clarence Hotel of Dover designed by John Whichcord Jr. (1823-1885) [*The Builder* 1863, 862-863], the residence of Charles Walker of Gloucester by John Giles (1830?-1900) [*The Architect* 1869, 214-215], the Children's Home of Kingston on Thames by Henry Saxon Snell (1831-1904) [*The Architect* 1874, 320], and the house called Claremont View of Wimbledon by Charles Hambridge [*The Architect* 1876, 128]. Not only in England but also some buildings in America began to feature Italianate campaniles, like the Purdue University [*The American Architect* 1876, 62], the Police Station at St. John in New Brunswick [*The American Architect* 1878, 157, plate 123], several city halls (Utica, 1849-53; Tacoma, 1893; Rockford, 1904; Lakeland, 1913), and some railway stations (Portland 1890-96, Dayton, 1901).

In 1849 John Ruskin (1819-1900) had published the first edition of *The Seven Lamps of Architecture*, that presented various Italian medieval and Early Renaissance architecture, including several towers of Verona, Venice, Florence, and some other Tuscan cities. Many 19th century architects were interested in the north Italian medieval campanile, especially the Lamberti tower of Verona. The notable architect George Edmund Street (1824-1881) wrote a book entitled *Brick and Marble in the Middle Ages: Notes of a Tour in the North of Italy* (1855), in which presents this Veronese tower [Street 1874, 84], and some other campanile with illustrations including the bell tower of the Basilica of Sant'Andrea in Mantua, which resembled the Lamberti Tower.

As a result, the Italian campanile design was applied to British industrial towers. In 1858 Robert Rawlinson (1810-1898) published a beautiful collection of lithographs, *Designs for Factory Furnace and other Tall Chimney Shafts* [*The Builder* 1857, 231], in which he evaluated Italian medieval brick ornamentation: «There are numerous architectural works in existence which owe their beauty, in a great measure, to terracotta ornament and coloured glazed bricks. There are many beautiful examples of enriched arches, strings, panels, and cornices in the buildings of Italy» [Rawlinson 1858, 5]. One of its plates illustrates an industrial shaft reproducing exactly the design of Lamberti Tower: «Ventilating Tower, or Chimney - Shaft, in brickwork with terra - cotta cornices and



11—CAMPAÑILE S. ANDREA MANTUA.

Fig. 3: Engravings of the Lamberti Tower in Verona and the bell tower of the Basilica di Sant'Andrea in Mantua (Street 1874).



Fig. 4: Robert Rawlinson, *Designs for Factory Furnace and other Tall Chimney Shafts*, 1858.



Fig. 5: John Henry Chamberlain and William Martin, Edgbaston Pumping Station, Birmingham, constructed around 1870, today.

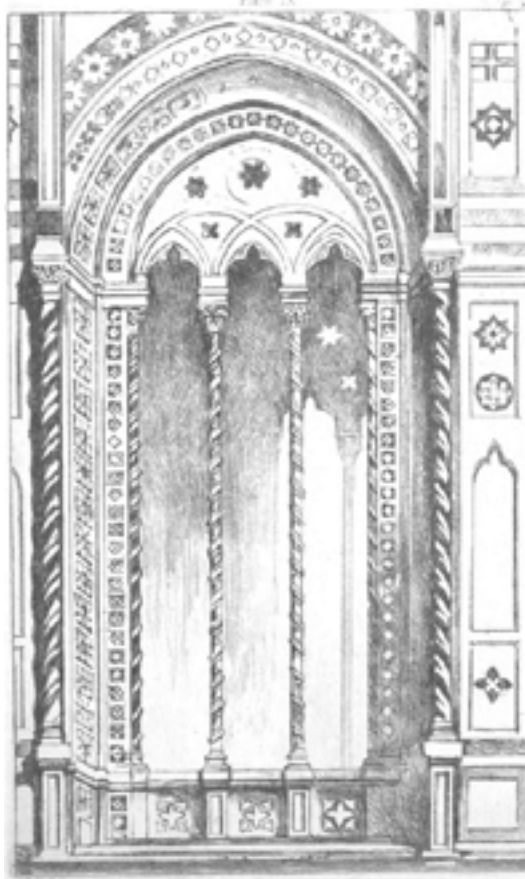


Fig. 6: Detailed illustration of Giotto's Campanile in the first edition of John Ruskin's *The Seven Lamps of Architecture* (1849) on the left and in the second edition (1855) on the right.

open cast - iron roof. For original, see Campanile Piazza de' Signori, Verona» [Rawlinson 1858, 9]. Meanwhile, *The Art Journal* of that time reported on Rawlinson's proposal with the following comment: «The substitution of such graceful, slender structures as may rival the campaniles and watch-towers of Italy [...] many are the early, tall, slight towers of Italy, which are thoroughly chimney-like in their proportions» [Virtue 1863, 59].

After this publication by Rawlinson, several industrial shafts made of brick appeared, based on the Lamberti Tower design. In London, the Grand Junction Water Works Company offered at least two standpipes resembling the Lamberti Tower: one at Campden Hill (1857) and the other at Brantford (1867). However, in 1848 the Royal Botanic Kew Gardens already had a water tower in the style of Lamberti Tower, designed by Decimus Burton (1800-1881). Also the Edgbaston Pumping Station in Birmingham is a brick tower decorated like the Lamberti Tower, erected around 1870 by John Henry Chamberlain (1831-1883) and William Martin (1829-1900). Furthermore, in Holbeck, near Leeds, a factory tower (1864-66) was built exactly similar to the Lamberti Tower, with the later addition of two more brick towers: one like Giotto's Florentine campanile (1899) and the other like a plain tower in San Gimignano (1919) [Leach - Pevsner - Minnis 2009, 557]. The motif of the Lamberti Tower even appeared in early 20th century American architecture: in the Greek Revival style of Springfield's Municipal Group buildings,



Fig. 7: Perspective of Boston's Fire Station, which is modelled on the Palazzo Vecchio of Florence (*The Architectural Review* 1891, plate XXII).

completed in 1913, the clock tower in the center of the Group demonstrates the motif of the Lamberti Tower [*Architecture* 1920, 350-353].

Other examples of Italianate campanile design being applied to British water towers or pumping station chimneys were erected at least in the following places: Cleadon in South Tyneside (1862) [Yorke 2018, 16], Margaret Street in Liverpool (1864) [De Witt 2017, 97], India Mill in Darwen (1867) [*The Building News* 1868, 806], Aldeburgh (1871), Grosvenor Road in London (1875), Lambeth Workhouse in London (1877), Bracebridge (1881), Littlehampton (1882) [*The Builder* 1882, 108], Clochester (1883); Tewkesbury (1889), Brook Fever Hospital in London (1896), and also in America, such as the Water Tower in Weehawken (1883) by Frederick Clarke Withers (1828-1901) [*The American Architect* 1883, 114, plate 402], the Pumping Station for Brooklyn Water Works Clear Stream (1886) [*The American Architect* 1886, 210, plate 540], the New Water Tower at Bissell Street in St. Louis (1886), and the Main Plant of Sears, Roebuck & Co. in Chicago (1917) by George C. Nimmons (1865-1947) and William K. Fellows (1870-1948) [*The American Architect* 1917, 116-117].

On the other hand, Ludwig Gruner (1801-1882), the German art adviser to Prince Albert, published an illustrated book, *The Terracotta Architecture of North Italy* (1867), in which he presented several medieval campaniles, including the bell tower of Crema's Cathedral, composed with an octagonal pillar on a quadrangular base pillar, like the Veronese Lamberti Tower [Gruner 1867, 23-24]. In the second edition of Ruskin's *Seven Lamps* (1855) the illustration of the tracery of Giotto's Campanile was drawn more finely and it was moved to the frontispiece position. The passion for Tuscan medieval or Renaissance campaniles resulted in many public buildings with Italianate towers. It was not surprising that several architects submitted plans with Italianate towers in the competition for London's New Law Courts in 1866-67. For example, Alfred Waterhouse (1830-1905) proposed a Venetian Gothic concept with two Italianate towers: one inspired by St Mark's Campanile in Venice, and the other looking like a mixture of some Tuscan bell towers [*The Building News* 1867, 255-256]. While William Burges (1827-1881) submitted a design with a tower resembling that of the Florentine Palazzo Vecchio [*The Building News* 1867, 308-309], Henry Francis Lockwood (1811-1878)'s «Strand façade is crowned by a lofty tower, which recalls the campanieles of Belgium and Italy. His use of coloured stones and certain other details have points of analogy in Giotto's Tower and the Cathedral of Siena» [*The Journal of the Society* 1867, 199]. In the end, no project with an Italianate tower was realized, however Lockwood later completed the Town Hall in Bradford (1869-73), which was accompanied by a tower modelled on the Palazzo Vecchio in Florence [*The Building News* 1869, 265].

Towers based on the Palazzo Vecchio motif were preferred for many types of public buildings. One of the earliest examples was the City Hall in Fürth (1840-50, Bürklein brothers) in Germany. In England, the Municipal Swimming Baths in Ashton Under Lyne (1870, Paull & Robinson) has a tall shaft in Tuscan campanile style [*The British Architect* 1874, 233]. In London, the Infirm Wards & Administrative Office of St. Luke's Workhouse incorporated two campaniles [*The Architect* 1879, 188-189].

In America the following cases adapted the Tuscan style campanile: the Town Hall of Easthampton (1869); two competitive designs for the New York Produce Exchange: one unrealized, by Richard M. Upjohn (1828-1903) [*The American Architect* 1883, 115, plate 402], and the other accepted, by George B. Post (1837-1913) (1884) [*The American Architect* 1886, plate 548], and the City Hall of Worcester (1898) [*The American Architect* 1896, plate 1071]. Furthermore, at that time, Worcester also had the Central Fire Station, which was highly similar to the Palazzo



Fig. 8: The Times Building in New York, postcard of the early 20th century.

Vecchio. In the 1890s, several fire station buildings were designed with a Tuscan medieval style tower, in the following cities: Helsinki (1891) in Finland, Melbourne (1892) in Australia, and many places in America including Boston (1891) [*The Architectural Review* 1891, plate XXII], Cambridge in Massachusetts (1893) [*The American Architect* 1893, plate 914], Somerville (1894) [*The American Architect* 1894, plate 969], Southbridge (1899), and others.

In 1884 *The American Architect* reported on the Mangia Tower in Siena [*The American Architect* 1884, plate 466], and after the appearance of this article, some buildings were modelled on Siena's tower, which has more slender shape than the Florentine tower. Therefore, this design was found suitable for some lofty towers like the Birmingham University clock tower (1900-9, A. Webb), the Pilgrim Monument in Provincetown (1900-7) [Carpenter 1911, 153-154], the clock tower of the Waterbury Union Station (1909, McKim, Mead & White), and the Bromo-Seltzer Tower Building in Baltimore (1911, J.E. Sperry), which is a mixture of some Tuscan towers and the Lamberti Tower. It was the tallest in the city at that time.

The same issue of the aforementioned journal reported also an impressive photo of the Florence Cathedral with its imposing Giotto's Campanile, which reached almost the same height as its dome [*The American Architect* 1884, plate 466]. The new façade competition for the Florence Cathedral dated back to the 1860s, but it was finally completed in 1883 with its design modelled on a motif of Giotto's Campanile. Then, in the same year, the German architectural journal *Deutsche Bauzeitung* reported on its new façade design [*Deutsche Bauzeitung* 1873, 97, 120], appearing subsequently in *The Builder* in 1886 [*The Builder* 1886, 482]. So, we can find some examples inspired by Giotto's campanile as seen as the following cases: the Mumbai University clock tower in Bombay (1869-78, G.G. Scott); two competitive plans for the Washington Monument in Washington D.C. (1879) [*The American Architect* 1879, plate 162; 168], the Grand Central Station in Chicago (1890, S.S. Beman), and the Times Building in New York (1904, C.L.W. Eidlitz) designed by the author of the Dearborn Street Station in Chicago (1885), that has an Italianate campanile tower.

In the context of the completion of Florence Cathedral's new façade, with respect to Giotto's bell tower design, *The American Architect* continually presented, in the years 1884-85, photos of several Italian medieval campaniles such as that of the Siena Cathedral [*The American Architect* 1884, plate 469], St. Mark's in Venice [Blackall 1885, 99-101], the San Martino in Lucca [*The American Architect* 1885, plate 511], the San Francesco in Assisi [*The American Architect* 1885, 513], the Santa Maria Maggiore in Rome, and in 1886 sketches of the following Italian medieval towers: Pistoia Cathedral, San Nicola and the San Francesco in Pisa, and three towers in Lucca: the Torre Giunigi, the San Michele and the Clock Tower [*The American Architect* 1885, plate 521]. In fact, in those years, in America several churches were designed in Italianate style. For example, the bell tower of St. Stephen's Church in Wilkes-Barre (1885-97, C.M. Burns) resembled the Pistoia Cathedral campanile [*The American Architect* 1885, plate 511]; while the two competitive plans for General Grant's Memorial in New York proposed a tower form similar to St Mark's Campanile [*The American Architect* 1885, plate 509].

### 3 | Examples inspired by St. Mark's Campanile in Venice

The design of the Venetian bell tower became the most favorite motif for the many types of public buildings in English-speaking countries, in particular after the publication of Ruskin's *The Stones of Venice* (3 vols., 1851-1853). In the first volume, Ruskin presented St Mark's Campanile as one of the most ideal examples of the finest tower shape that satisfied his proposed conditions, describing it as follows: «It is built as simply as it well can be to answer its purpose: no buttress-

es; no external features whatever, except some huts at the base, and the loggia, afterwards built, which, on purpose, I have not drawn, one bold square mass of brickwork» together with an etching depicting this Venetian tower, in the same scale next to the new Edinburgh college tower as a bad example in contrast with the ideal one [Ruskin 1851, 201]. The American edition first volume was also appeared in the same year 1851 by John Wiley in New York, while the British second edition was published in 1858, and that American one in 1860. The new edition appeared in 1874, and in 1877 Ruskin published the first part of *St. Mark's Rest. The History of Venice* from publishing houses both in London (George Allen) and New York (John Wiley). Furthermore, in 1879 the so-called 'traveller's edition' of *The Stones of Venice* was published also by both publishers. Eventually, over twenty editions were published until the end of the 19th century, also in the United States.

As the result, especially in the 1870s, many public buildings began to be erected with a tower inspired by the St Mark's Campanile design. Initially, this tendency was especially remarkable for churches. For example, in Boston the Old South Church (1873-75, A. Cummings and W. T. Sears) was designed with a bell tower similar to the St Mark's Campanile accompanied with angular turrets like the San Zeno Church of Verona [*The American Architect* 1887, plate 605], and its interior was decorated in the Venetian Gothic style modelled on the detail of the Ducal Palace [*The American Architect* 1876, 46; 1877, 13]. In 1876 *The American Architect* presented the perspective view of the First Presbyterian Church in Ironton, Ohio, with the St. Mark's type bell tower designed by J.K. Wilson [*The American Architect* 1876, 46], but it was realized without its pointed roof. So in this way, numerous American churches were planned with a bell tower modelled on the Venetian campanile, including the following cases: the Memorial Church in Gettysburg (1884, J. A. Dempwolf) [*The American Architect* 1884, plate 456], the New Baptist Church in Malden (1889, Shepley, Rutan & Coolidge) [*The American Architect* 1889, plate 701], the Presbyterian Church in Liberty (1889, W. Polk) [*The American Architect* 1889, plate 713], the Presbyterian Church in Buffalo (1890, Green & Wicks) [*The American Architect* 1890, plate 762], St. Mary's R.C. Church in Paterson (1891, C. Edwards) [*The American Architect* 1891, plate 785], Temple Keneseth, a synagogue in Philadelphia (1892, Hickman & Frotcher) [Morris Skaler 2003, 106], and Saint John's Church in Johnstown (1895, Beezer Brothers) [*The Brickbuilder* 1900, 207]. Also in Europe, there were these examples: St. Margaret's Church (1880, E. Buckton Lamb) near Nice in France [*The Builder* 1880, 343], the Church of St. George (1888, T.R. Spence) in Newcastle on Tyne in England [*The Builder* 1889, 252-253], the Catholic parish church of St. Katharina (1894, A. Williard) in Busenbach in Germany [*Deutsche Bauzeitung* 1894, 465-469], and so on.

During the second half of the 19th century, many city hall buildings were accompanied by a tower, so some of them had one modelled on the St Mark's Campanile. In 1875 *The British Architect* published a perspective view of the New Town Hall in Kingston (now Dún Laoghaire, Ireland) with a clock tower like St Mark's Campanile, proposed by J. L. Robinson [*The British Architect* 1875, 8]. In 1883 the notable American architect Henry Hobson Richardson (1838-1886) realized the City Hall in Albany with a Venetian style campanile [*The American Architect* 1889, plate 707; 1920, 820], and his so-called Richardsonian Romanesque style influenced several city halls with campaniles like those in Cambridge, Massachusetts [*The American Architect* 1888, 657], and in Minneapolis [*The American Architect* 1888, plate 641]. Also, the British architectural firm Morris & Hunter proposed competitive designs for two municipal buildings, both with a tower modelled on St. Mark's Campanile, for Edinburgh [*The Builder* 1887, 508-513] and Sheffield [*The Builder* 1890, 424-425; plate 1872]. Other American public buildings built in the 1890s with a tower like

St. Mark's Campanile were the Belknap Country Court House in Laconia (1892, W.M. Butterfield) [*The American Architect* 1893, plate 915; Yorke 2018, 16] and the Post Office in Detroit (1890-97, J.H. Windrim). Elsewhere, the city halls of Kiel in Germany (1907-11, H. Billing) and Brisbane in Australia (1920-30, Hall & Prentice) have towers like St. Mark's Campanile, which were transformed in neoclassical style.

On the other hand, the Venetian campanile was also preferred for the design of university clock towers. In 1881 *The Builder* reported on Edinburgh's new university buildings in Italianate Renaissance style with a tower, which was very similar to St Mark's Campanile, proposed by Robert Rowand Anderson (1834-1921) [*The Builder* 1881, 622]. In the United States, the so-called Campanile of the Iowa State University (1898, G.E. Hallett), the Sather Tower of the University of California in Berkeley (1914, J.G. Howard) and the Wheeler Hall tower (1917) located in the same campus are modelled on St. Mark's Campanile [Coulson - Roberts - Taylor 2015, 120], however, these rather resembled San Zeno's campanile in Verona due to the presence of angular turrets around the roof. Perhaps this was related to the earlier publication by *The American Architect* of the San Zeno Church in 1880 [*The American Architect* 1889, plate 700] and St. Mark's Campanile in 1908, on the occasion of its rebuilding after the collapse of 1902 [*The American Architect* 1908, 121-123]. Furthermore, the Library Tower of Cornell University in Ithaca (1891, W. H. Miller), and the Mudd Hall Tower of the University of Southern California in Los Angeles (1930, R.C. Flewelling) followed this trend of taking inspiration from the Venetian campanile. In addition, several railway stations were also designed with a clock tower resembling the St. Mark's or San Zeno's campanile, such as Battle Creek's railroad station (1888, Rogers & MacFarlane) [*The American Architect* 1889, plate 692], the Toronto Union Station (1894, Strickland & Symons) [*The American Architect* 1894, plate 970], the Seattle King Street Station (1906, Reed & Stem), and the North Toronto Station (1916, Darling & Pearson) [Settis 2016, 70].

The St Mark's Campanile motif was often preferred for early American skyscrapers. The Chicago department store, Montgomery Ward & Co. Building (1899-1907, R.E. Schmidt), was one of the earliest skyscrapers inspired by the Venetian campanile design [Solomonson 2003, 104; 326]. Today it has lost its pointed roof, but at the time of its completion, it was the tallest building in Chicago. The presence of a tower was a typical architectural trend also for department stores at the beginning of the 20th century. So, the Venetian campanile design was used for the Daniels & Fisher Tower in Denver (1910, F. Sterner), which at the time became the highest in the city, and the unrealized project for the Selfridges department store in Oxford Street in London (1925, J. J. Burnet)<sup>1</sup>. Also, some insurance companies and banks often preferred their office buildings to have a lofty tower, which could symbolize their financial power. Sometimes it became the tallest in the city and was modelled on St Mark's Campanile, like the Metropolitan Life Insurance Company Building in New York (1909, N. LeBrun), which was, in fact, the tallest in the world until the construction of the Woolworth Building in 1913. Then, the St. Mark's Campanile motif was merged with the design of the Mausoleum of Halicarnassus in neoclassical style, because of the presence of the similar triangular roof shape with a colonnade in its upper façade as seen in the Bankers Trust Company Building at 14 Wall Street in New York (1912, Trowbridge & Livingston), the Union Central Life Insurance Building in Cincinnati (today PNC Tower; 1913, C. Gilbert), the tallest until the completion of the Carew Tower in 1930 [*Cincinnati* 1943, 175], and the Straus Building in Chicago (later Continental Companies Building, today Metropolitan Tower; 1924, Graham, Anderson, Probst & White), at that time the tallest in the city. Other examples of neoclassical skyscrapers modelled on a mixture of the St. Mark's Campanile and the Mausoleum are the L.C.

<sup>1</sup> Photograph of a plaster model for the proposed Selfridges department store with a tower, Royal Institute of British Architects Collections: RIBA 20855.



Fig. 9: The Montgomery Ward & Co. Building in Chicago, postcard of the early 20th century.



Fig. 10: Napoleon LeBrun, Metropolitan Life Insurance Company Tower, New York, constructed in 1909, today.

Smith Tower in Seattle (1914, Gaggin & Gaggin), which was built as the highest office building in the world outside of New York and the Custom House Building (1915, Peabody & Stearns), the tallest in Boston until construction of the Prudential Center Tower in 1964.

On the other hand, some industrial towers were inspired vaguely by the Venetian campanile as seen as following examples: the ventilating tower for the now demolished Presbyterian Hospital in New York (1889, J.C. Cady) [*The American Architect* 1889, plate 689]; the Water Tower in Fort Sheridan (1891, Holabird & Root), before its renovation in Romanesque style in 1949 and the Jones Beach water tower in New York (1929, H. Corbett), constructed in brickwork with Art Deco style [Hanc 2010, 81]. It seems that the St. Mark's Campanile motif was less preferred for water towers or chimneys than the Tuscan or Veronese motifs, so it plays a role rather as a symbolic icon like the Jones Beach tower, which is monumental in its setting. In fact, the unrealized project of 1922 for the Great War Memorial to Soldiers, Sailors, and Marines to be erected in Boston [*The American Architect* 1922, 89-92], was considered too similar to the St. Mark's Campanile. Probably because of this, the «Plan of the proposed island to be built in the Charles River Basin between Boston and Cambridge» [*The American Architect* 1922, 90] would be associated with the lagoon of Venice.

#### 4 | Conclusion

As seen from the above numerous examples, during the second half of the 19th and early 20th century, the preference toward the Italian campanile style was more obvious among British and American architects. Sometimes German architects also followed this tendency, but in France there no significant examples. Perhaps because their *Beaux Art* education was based on the neo-classical architecture with the *Prix de Rome*, afterwards adding the Neo-Renaissance and Baroque style during the period of Napoleon III. On the other hand, Germany had a trend of *Rundbogenstil* as a romantic national architectural style connected to the Italian Medieval and Early Renaissance style, supported by Heinrich Hübsch, Friedrich von Gärtner, etc., and it included the aforementioned Italian Campanile style churches in Potsdam designed by Ludwig Persius. In English-speaking countries, many scholars as represented by John Ruskin and their publications appeared that were dedicated to the history of Medieval Italian art and architecture including many significant medieval bell towers, which became the preferred motif for early high-rise buildings. Another reason for the lack of examples in France was probably the 300 meters Eiffel Tower erected in 1889, which conquered the world's highest architecture challenge, so convincingly that there was little need to elaborate on the high buildings attached by tall towers with Italian campanile motif. Germany, which had won the Franco-Prussian War but had been outdone by the technical prowess of the Eiffel Tower, built the world's tallest church with the Ulm Minster (1890) and the world's tallest iron bridge over the Wupper River, the Müngsten Bridge (1897), at over 100 meters high. Hence, in Germany, the desire for tall buildings is to a certain extent satisfied in these genres, which may explain why there are fewer examples of public buildings with tall towers inspired by the Italian bell towers than in Britain and America. And finally, in New York, the world's tallest office building was born, with the Metropolitan Life Insurance Building, a skyscraper over 200 meters high, designed inspiring by Venetian St Mark's bell tower. So, the tendency toward the use of the Italianate campanile style for the tallest buildings corresponded with the preferences that depended not only on the background of the architectural style trend but also the highest structure challenges among the Great Powers.

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