

The Limited Monopoly

A FOUNDATION IN THE LAW:

Patenting Structures and Buildings

by Robert Gunderman, PE and John Hammond, PE

A little bit of history...

Many buildings, bridges and other structures fall within the realm of patentable subject matter. Yet, in today's fast paced world of design and build, patents are often not considered. This is due in part to the fact that often there are many design professionals that work on a project, and it is difficult to identify the true inventors. In addition, a patent application must be filed within a year of the first public disclosure of the invention. With many projects, the time span from the first public disclosure, say in a planning meeting, to the final design can easily span more than a year. Also, the reality of our modern world is that some projects do

For example, in the late 1700's and early 1800's, timber was plentiful and there were many timber bridges constructed. Of course, timber bridges had their technical challenges, and from 1797 to 1860 there were 51 patents issued for timber bridges. Some of the more

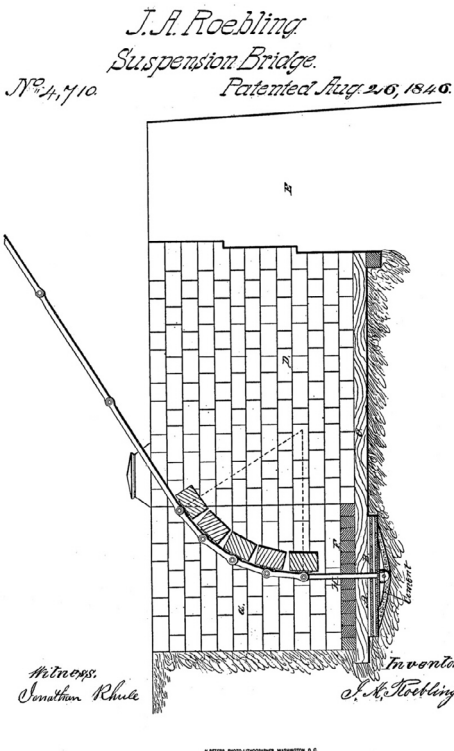
completed in 1883 and has two distinctive stone towers, four main cables, anchorages, diagonal stay cables, four stiffening trusses, and spans an amazing 1,595 feet. Currently, it supports about 145,000 vehicle crossings per day!

“As engineering firms struggle to differentiate themselves from the ‘RFP-low bidder-engineering as commodity model’ that has plagued our field, the right to exclude others ... may have tangible value to the future of your firm or business.”

famous were Town's lattice truss patented in 1820, Long's truss bridge patented in 1830, the Howe truss patented in 1840, and the Pratt truss patented in 1844.

Class 52- Static Structures (e.g., Buildings)

Buildings, bridges, and other structures can be the subject of a utility patent or a design patent, or both. A utility patent protects the way something works¹ provided that it falls under specific statutory classes. The invention must be a composition of matter, an article, an apparatus, or a method or process of accomplishing something. A design patent protects the way an article looks². Clearly static structures like buildings and bridges may be eligible for both utility and design patent protection. The United States Patent and Trademark Office has designated Class 52 to include utility patents that are static structures. There are currently 9,057 patents in Class 52. Some are building components and systems such as roofing, flooring, walls, foundation materials, etc. There are also complete structures in Class 52 ranging from stadiums and auditoriums to preassembled



An excellent example of patents and their role in civil engineering is the work of John Roebling. A German immigrant and a highly respected civil engineer, Roebling established a wire rope factory in Saxonburg, Pennsylvania and held U.S. Patent 2,720 entitled "Method of And Machine For Manufacturing Wire Ropes." He later went on to build spectacular suspension bridges such as the Niagara Suspension Bridge with a span of 821 ft. on the Grand Trunk Railway below Niagara Falls. This bridge design addressed a problem inherent in previous suspension bridges where they tended to move in wavelike motions under the influence of loads such as the wind or marching soldiers. Of course, most of us can remember seeing footage of the Tacoma Narrows Bridge ("Galloping Gertie") in engineering school. Roebling came to excel in bridge design and further the profession in many ways. He held U.S. Patent 4,710 entitled "Anchoring Suspension-Chains For Bridges," and went on to design the Brooklyn Bridge. A stunning work of civil engineering mastery, this bridge was

not contain the creativity and craftsmanship necessary for a patent application to be seriously considered by the inventors.

Yet over the years, many civil engineering projects have been the subject of patents.





structural components to burial vaults to multi-level buildings with ramps. A quick search in the stadium and auditorium subclass within class 52 reveals an ice skating arena patent on the top of the list. The inventor is from – you guessed it – Canada.

Pursuing a utility patent for your structural design should be weighed carefully in the overall business objectives of your firm. As engineering firms struggle to differentiate themselves from the “RFP - low bidder - engineering as commodity model” that has plagued our field, the right to exclude others from making, using or selling your structural design or other work that involves an innovative method, process, apparatus, article, or composition of matter may have tangible value to the future of your firm or business. It may also help to differentiate your proposal from all the others.

The Role of the Design Patent for Engineers and Architects

Often times complimentary to a utility patent, or an alternative if the ornamental appearance of the building or structure is most important, the design patent has its role in protecting how your design looks. As engineers, many of our designs have a beauty that is unique and represents our final work product that is visible to the public and potential clients. It can be a calling card that lasts for many years to come. If the ornamental appearance is worth protecting, a design patent may have a role. Architects have used design patents over the years to protect unique designs for houses and buildings that they consider their personal “signatures.” A quick glance at the design patents at the United States Patent and Trademark Office reveals thousands of design patents for buildings, houses, bridges, restaurants, gazebos, swimming pools, arches, road systems, etc. Class D25 contains patents and published applications that relate to the design of building units and construction elements. Under class D25, one can find subclasses that include arenas, stadiums, geodesic domes, towers, A-frames, carports and garages, windows, fences and gates, stairs, and many others.

An architect, for example, may wish to protect the ornamental

appearance of a custom and unique house to prevent a cookie-cutter home builder from taking curb side photographs and copying the exact ornamental appearance in a new subdivision. Another example may be a design patent for a restaurant building in which the ornamental appearance of the restaurant building signifies a certain restaurant chain, and the owner of the restaurant chain wishes to prevent others from constructing restaurant buildings that are confusingly similar to the restaurant chain’s unique building appearance.

United States Patent [19]

Berman

[11] Des. 257,538

[45] ** Nov. 18, 1980

[54] DRIVE-UP BANKING BUILDING

[75] Inventor: James S. Berman, New York, N.Y.

[73] Assignee: Citibank, N.A., New York, N.Y.

[**] Term: 14 Years

[21] Appl. No.: 944,874

[22] Filed: Sep. 22, 1978

[51] Int. Cl. D25-03

[52] U.S. Cl. D25/33

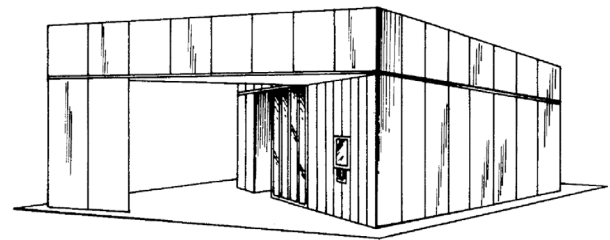
[53] Field of Search ... 22, 23, 24, 25,

[57] CLAIM

The ornamental design for a drive-up banking building, as shown.

DESCRIPTION

FIG. 1 is a perspective view taken generally from the right rear of the drive-up banking building;
 FIG. 2 is a perspective view taken generally from the front right of the building;
 FIG. 3 is a left elevational view;
 FIG. 4 is a rear elevational view;
 FIG. 5 is a right side elevational view;
 FIG. 6 is a front elevational view;
 FIG. 7 is a sectional view taken from the driveway facing the building.



Regardless of the reasons for protecting the ornamental appearance of your building or structure, it is important to be relatively certain that the ornamental appearance is unique, and has not been done before. It is also important to be sure that a patent application is filed prior to a year from the first public disclosure of the design, even if the design is a blueprint and has not yet been built.

The Future

As our profession and our role as engineers continues to evolve, it is important that we not only adapt to changes, but that we protect our strongest asset - our intellectual output. If we allow our profession to become “commoditized,” it damages the future viability of engineering as an occupation. Creative, unique and innovative solutions to the complex problems that our society faces, from infrastructure to health and safety, should be the hallmark of our profession, not the exception. These solutions should be valued, as they are the work product of the engineering mind, and the very essence of our profession.

1. 35 U.S.C. 101

2. 35 U.S.C. 171

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