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COVER: A detailed view of the U.S. Capitol's Statue of Freedom. *Photo illustration by Michael Dunn*



Photo by James Rosenthal

ARCHITECT'S NOTEBOOK

Finding Comfort In Balance

t is human nature to try to find order and balance in our surroundings. One of the ways I do this in my own life is to be as organized as possible. My desk is proof of this as it is always arranged neatly with nothing out of place. This gives me a sense of ease so I can focus on other tasks at hand.

The concept of order is important to me and may have been what drew me to becoming an architect. Certainly, order, balance and proportion are all manifested in some of my favorite works of architecture, particularly those on Capitol Hill.

Most of our buildings on Capitol Hill are designed in a Neoclassical style, which has an orderly design with carefully developed proportions often consisting of three elements: a base, a middle and a top. This grouping of elements gives us comfort in its predictability and creates balance. Things are arranged in a way that matches our expectations.

The base in classical architecture is often rusticated with a decorative technique that makes it appear heavy and sturdy. The middle is more refined to provide a transition before our eyes reach the top, which balances out the base by being light and delicate in design.

One of my favorite examples of these classical concepts can be found in the Renaissance Revival design of the Thomas Jefferson Building's Main Reading Room with its eight giant columns. Each column has a large, defined pedestal base with a smooth marble column as the middle and is topped off with intricate details of the entablature with its projecting cornice.

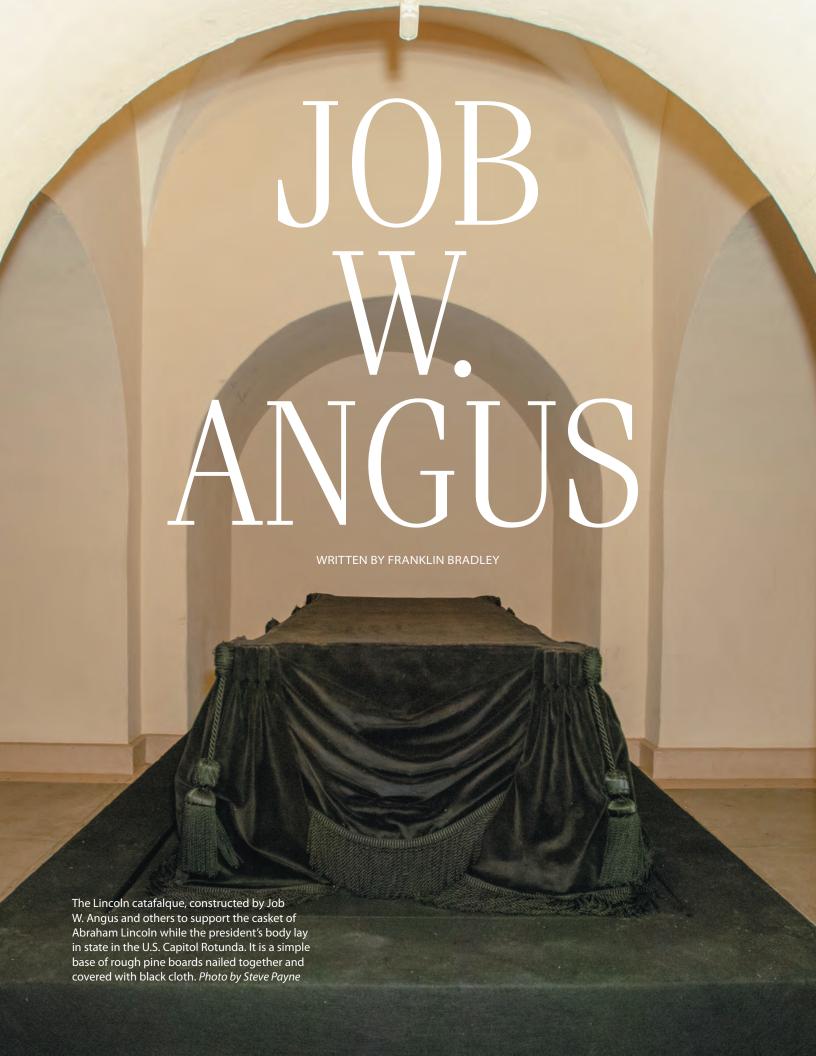
Architectural balance is also often achieved through symmetry. In the Main Reading Room, the art, decoration and sculpture reinforce a sense of order by the strong organizing element created by the monumental columns.

Each of the eight ornate Corinthian columns is flanked by a richly carved screen wall of Siena marble and support an allegorical statue representing an area of intellectual pursuit that is identified in the wreathed plaque immediately below it.

Blending art to architecture, the bronze statues nearest the column are of prominent figures related to its designated intellectual pursuit. Above each allegorical figure is a triangular pendentive, formed where the two arches that support the dome meet, decorated with winged figures that hold between them a large tablet with a related inscription.

Intuitively, we like it and it looks nice. The reason for this pleasant experience comes from the use of order, balance and symmetry in classical design.

Stephen T. Ayers, FAIA, LEED AP Architect of the Capitol





The ballroom built by Job W. Angus for the grand ball to celebrate President Lincoln's first inauguration in 1861. It featured many gas lamp fixtures to illuminate the interior, which was reported to be large enough to accommodate 3,000 people. Image courtesy of Anne S.K. Brown Military Collection, Brown University Library

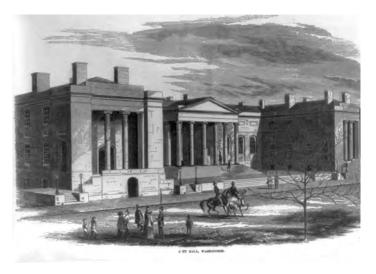
The night before his assassination, President Lincoln dreamed that he was standing in a ship under full sail, rapidly approaching an indefinite shore. He reported having this dream before every major event of his presidency. Although those dreams were surely symbolic, Lincoln entered and left Washington, D.C., via vessels of muslin and wood, constructed by a builder and carpenter who had risen to the position of assistant commissioner of public buildings, Mr. Job W. Angus.

ollowing the election of Lincoln to his first term as president, Angus built a ballroom of yellow pine that was the site of Lincoln's inaugural ball. Located behind the 1861 location of Washington's city hall, the building was dubbed the "white muslin Palace of Aladdin." One can imagine this temporary structure draped in beautiful white fabric, evoking the tents of nomads, billowing in the desert winds.

Perhaps because the ballroom was intended to be a temporary structure, it relied on the City Hall for many facilities. The council chamber was used as the ladies' dressing room while the courtroom was converted into a hat room for the occasion.

The National Republican newspaper reported that, "The hall was lighted up in a brilliant manner and presented a most fairylike appearance."







CLOCKWISE FROM LEFT: Ball gowns of distinguished ladies who attended Lincoln's 1861 inaugural ball. City Hall, adjacent to the ballroom, was the location of dressing rooms for attendees. Map of Washington, D.C. printed in 1861, showing the location of the City Hall at the time. Library of Congress photos

Apparently, the word "palace" was not lightly used, as the paper also reported, "The room itself is much larger than any ever before erected in this city for a similar purpose; and in all its arrangements reflects the highest credit upon all engaged in its construction."

Four years later, Angus was again called on to build a structure for a ceremony held for President Lincoln, but this was to be a simpler construction for a sad occasion.

In April of 1865, news of Lincoln's assassination reached Benjamin Brown French, Commissioner of Public Buildings, who was responsible for the care of all federal buildings in Washington, D.C., including the U.S. Capitol. French closed the U.S. Capitol, began preparations for the funeral, and directed his son, 20-year-old Benjamin Jr., to design the platform on

which the president's casket would rest, known as a catafalque.

Angus and others followed this design when they nailed together pine boards to create a 7-foot-long platform, set on an 8 1/2-foot-long base. This was covered in black fabric made and trimmed by French's wife. As he quickly assembled this platform, one can only wonder what thoughts came to Angus, who helped build not only the U.S. Capitol, but also the Smithsonian Castle and other notable buildings.

Did Angus look up to the new Dome that sheltered the catafalque, whose construction continued through the Civil War, and see it as a symbol of the ongoing building of a more perfect union, as Lincoln did? Did he reflect on the contrast of this small, dark bier, which sat under



In 2006, the Architect of the Capitol carefully restored the fabric that covers the catafalque constructed by Job W. Angus and others to hold President Lincoln's casket as he lay in state. Photo by Susanne Bledsoe

the center of that Dome, with the large, bright ballroom he had built so recently for the same man? Did he have any idea that, unlike the ballroom, which was quickly disassembled, this hastily built, simple platform would endure to bear the bodies of scores of great leaders for the next 150 years?

In the Rotunda, around the low platform Angus built, Capitol employees covered the walls, the eight large paintings, and all the statues but one with black cloth. Only the statue of George Washington, fitted with a black sash in the style of military mourning, was visible. As the public lined up outside, waiting to pay their respects, they were undeterred by a rain that soaked them as they slowly shuffled forward up the steps into the hushed space where Lincoln lay in state.

A New York Times reporter wrote, "thousands wended their way up the Capitol steps, into the grand rotunda, by the bier and coffin of the President, and then out at the eastern entrance. The people clung to their friend with tenacity, and their silent homage was deep and tearful." Citizens coming together one final time was a fitting send off to the man who had observed, "If all do not join now to save the good old ship of the Union this voyage, nobody will have a chance to pilot her on another voyage."

The next day, his casket was lifted off the catafalque, a simple pine platform wrapped in mourning cloth, and President Lincoln, who had piloted the nation through its greatest tempest, started his slow journey across the shores of many rivers to his final resting place in Illinois. 🕸



EVOLUTION OF Women in Art ATTHE U.S. CAPITOL

WRITTEN BY MICHELE COHEN

Women have long played roles in Capitol art. In the 19th century, they appeared primarily as allegorical figures in murals and architectural sculpture representing ideals, not individuals. However, as women took on more prominent positions in society and won basic rights (such as the vote, in 1920), their greater opportunities and visibility have led to more U.S. Capitol sculptures and paintings honoring women who have shaped American history. Further, in the 21st century, women are as likely as not to be the artists behind the art.







TOP: Constantino Brumidi, War detail from the *Apotheosis of Washington*, 1865. *Photo by Wayne Firth* **LEFT:** Prudence gazes into a mirror, here not a symbol of vanity but meant to convey the idea of reality, as opposed to what might be imagined. Next to her is a snake, signifying wisdom. *Photo by Ron Anderson* **RIGHT:** Temperance touches a bridle while a winged cherub pours water into wine, signifying physical and mental control. *Photo by Ron Anderson*

WOMEN AS ALLEGORICAL FIGURES

Allegorical figures embody concepts or types of activity (such as love or commerce) and often convey their meaning through the use of symbolic props, or "attributes," that allow the viewer to identify them. Many standard conventions are centuries old, such as the olive branch of Peace or the scales of Justice, but sometimes artists must devise new symbolism to represent new concepts.

The Statue of Freedom, atop the Capitol Dome, is arguably the most recognized female figure on Capitol Hill. Sculpted by Thomas Crawford and hoisted into place in 1863, she is both icon and inspiration. Consistent with centuries of depictions of women in western art, her colossal stature and jagged profile give shape to an aspiration, not a specific person.

Painter Constantino Brumidi also employed allegorical figures to address big ideas throughout his U.S. Capitol mural cycles. Some, such as War with her sword and shield, are easily recognizable. However, his depictions of the Four Cardinal Virtues (Prudence, Temperance, Strength [or Fortitude] and Justice) in the Senate Reception Room ceiling puzzle many visitors today, illustrating that what was readily understood in the 19th century has become more obscure for 21st century viewers. In Brumidi's scheme, the four Virtues, historically associated with individual leaders, have been transformed into attributes of a governmental body the Senate.

WOMEN ARTISTS

In Charles Fairman's 1913 book Works of Art in the United States Capitol, 15 of 142 artist biographies are of women. Now that number has more than tripled. The first woman artist to create art for the U.S. Capitol was Vinnie Ream, who was only 18 when she signed her contract to produce a statue of Abraham Lincoln, located in the U.S. Capitol Rotunda. Her selection fueled a public relations storm, and critics accused her of using her feminine charms to compensate for her inexperience - although she had, in fact, studied for about three years with sculptor Clark Mills in his U.S. Capitol studio (today the House Chaplain's Office, HB-25), which she eventually occupied as her own studio.



Vinnie Ream at work on her Lincoln bust, which rests upon the stand she used in the White House while President Lincoln posed for her. Photo courtesy of the Library of Congress



Of 20th-century artists represented in the National Statuary Hall collection, internationally acclaimed pop artist Marisol Escobar is among the best known. She created an unconventional likeness of Father Damien, donated in 1968 by the state of Hawaii, transforming her witty plywood constructions into a serious bronze. Photo by Susanne Bledsoe and Michael Dunn



Marisol Escobar and fellow artist Ortho Fairbanks at the unveiling and dedication of the Father Damien and King Kamehameha statues in 1969. Photo by Harry Burnett

Since Ream's day, an increasing number of female artists have created painted portraits and bronze and marble statues for the U.S. Capitol, some commissioned by Congress and some donated by states for the National Statuary Hall Collection. Anne Whitney was the first woman to sculpt a statue for the National Statuary Hall Collection. Her marble of Massachusetts's Samuel Adams was placed in 1876, just 12 years after the collection was created, and it was followed in 1905 by two Texan heroes, Stephen F. Austin and Sam Houston, by Elisabet Ney.

As of today, women artists have sculpted 16 of the 100 statues in the National Statuary Hall Collection, and several replacement statues by women artists are in the pipeline. The most recent statue sculpted by a woman to be unveiled is Barry Goldwater by Deborah Copenhaver Fellows, given by Arizona in 2015.

WOMEN AS SUBJECTS

Women are also featured in U.S. Capitol art as protagonists in the sweep of American history. Many are generic types, such as the vanquished Native American mother in Thomas Crawford's Senate pediment or the





Helen Farnsworth Mears, *Frances E. Willard*, placed 1905. *Photo by Susanne Bledsoe and Michael Dunn*



Leonard Crunelle, *Sakakawea*, placed 2003. *Photo by Susanne Bledsoe and Michael Dunn*

pioneer mother protecting her infant, a secular Madonna and child, in Horatio Greenough's Rescue, previously displayed on the north cheek block of the East Front and currently in storage.

The first woman depicted in the National Statuary Hall Collection was temperance leader and educator Frances E. Willard of Illinois, sculpted by Helen Farnsworth Mears and placed in 1905. Today nine statues in the collection celebrate women. In addition to Willard, they are architect and humanitarian Mother Joseph (Washington); Esther Hobart Morris, a judge and suffragist (Wyoming); Jeannette Rankin, pacifist and first woman elected to the House of Representatives (Montana); Dr. Florence Sabin, scientist and humanitarian; (Colorado), Sakakawea, member of the Lewis and Clark Expedition (North



Adelaide Johnson, Portrait Monument to Lucretia Mott, Elizabeth Cady Stanton, and Susan B. Anthony, placed 1921. Photo by Susanne Bledsoe and Michael Dunn



Eugene Daub and Rob Firmin, Rosa Parks, placed 2013. Photo by Susanne Bledsoe and Michael Dunn



Kadir Nelson, Shirley Chisholm, 2009. Collection of the U.S. House of Representatives. Photo courtesy of the Collection of the U.S. House of Representatives

Dakota); Maria Sanford, one of the first female college professors (Minnesota); Sarah Winnemucca, defender of human rights and educator (Nevada); and Helen Keller, disabled rights activist (Alabama).

Separate from the National Statuary Hall Collection, several other prominent U.S. Capitol artworks feature women of historical significance. Adelaide Johnson's Portrait Monument to Lucretia Mott, Elizabeth Cady Stanton, and Susan B. Anthony was presented in 1921 by the National Women's Party to mark the ratification of the 19th Amendment. In 2005, Congress passed legislation to commission a statue of civil rights activist Rosa Parks, and Artis Lane's bust of Soujourner Truth was unveiled in Emancipation Hall in 2009. An animated portrait of the first African-American woman to serve in the House of Representatives, Shirley Chisholm, was acquired in 2009. As more women from diverse backgrounds win elected office and gain increasing prominence on our national stage, U.S. Capitol art will continue to reflect the changing nature of women's role in society.

Restoration and Care of Historic Marble Floors

WRITTEN BY ELIZABETH YODER • PHOTOS BY THOMAS HATZENBUHLER



(left to right) Robert Brown, floor maintenance leader, installs resin honing disks onto the planetary head to begin restoration of a section of historic marble floor in the Russell Senate Office Building. Looking on is Dennis Anthony, floor maintenance technician supervisor.





Wayne Dorsey, floor maintenance technician, hones a section of marble floor using water and a series of disks of increasingly smaller grit sizes. While the interaction between the water and the stone initially results in a white liquid known as slurry (as seen in the photo), as the natural oils from the stone start to surface, the water becomes clearer.

Robert Brown, floor maintenance leader, uses a wet vacuum to extract the slurry before it dries and hardens on the surface of the stone.



(left to right) Robert Brown, floor maintenance leader, changes the honing disks to a finer grit which contains a higher percentage of diamond particles to further smooth the stone and bring out its natural shine. Lionel Turner, floor maintenance technician assistant supervisor, and Wayne Dorsey assist with the process.



(left to right) Wayne Dorsey continues to hone the floor, while Robert Brown uses a squeegee to keep the liquid from spreading beyond the work area.



Dinh Lam, floor maintenance technician, uses a burnishing machine with a natural fiber pad to polish the marble floor, which is more than 100 years old, to a high shine visible at least 12" from the surface of the stone.

Capitol Visitor Center

WRITTEN BY LAURA TRIVERS • PHOTOS BY CHUCK BADAL

The Capitol Visitor Center serves as the main entrance for visitors to the U.S. Capitol. It is a facility rich with informational exhibits, two gift shops, a cafe and two orientation theaters to enhance the visitor experience.



AGE 10-YEARS OLD

In December, the Capitol Visitor Center (CVC) will celebrate its 10th anniversary. Its unique location under the East Front Plaza increases public access to the U.S. Capitol.



BY THE NUMBERS



VISITORS 21 MILLION+

The CVC has welcomed more than 21-million visitors from across the country and around the world. Approximately 60 percent of visitors come to the U.S. Capitol between March and July.



HOURS

8:30 A.M. to 4:30 P.M.

The CVC is open Monday through Saturday, except for Thanksgiving Day, Christmas Day, New Year's Day and Inauguration Day. From the vestibule to the balcony to the gift shops and the cafe, the CVC team strives every day to inform, involve and inspire.







GIFT SHOP ITEMS MADE IN THE USA

100%

All merchandise in the CVC is made in the USA and supports small businesses from across the country. The merchandise reflects the season as well as the U.S. Capitol and the exhibits in Exhibition Hall. Many items are made exclusively for the shops. Gift shop sales clerks help visitors find the perfect keepsakes that remind them of their U.S. Capitol experience.





Making Heads Safer, One Bump Cap at a Time

WRITTEN BY CRISTIN O'BRIEN . PHOTOS BY JAMES ROSENTHAL

he men and women who carry out the mission of the Architect of the Capitol (AOC) to serve, preserve and inspire are frequently in full view of the public.

And then there are the staff that work behind the scenes, in corridors, crawlspaces and nooks that resemble secret passageways. These hidden spaces are constricted — you often have to bend over and in some cases literally crawl. But these areas are not neat with smooth walls. The spaces are lined with pipes and metal hangers, vent shafts, cables, and many other protrusions that further congest the tight, yet expansive labyrinth so few get to see. This is where you will often find Air Conditioning

Equipment Mechanic Clinton Johnson as he goes about his day.

Johnson and other members of the Capitol Building jurisdiction maintain the infrastructure of the U.S. Capitol from top to bottom: plumbing, wiring, HVAC, electrical and more. Personal protective equipment (PPE) is issued to each employee to protect themselves, including hard hats. However, hard hats are designed to protect from falling objects, not bumps in narrow spaces where the hats can get stuck, restrict head clearance and can fall off when the wearer is bent over. In 2010, an employee asked for an equipment review for work in tight spaces. Occupational Health and Safety Specialist

Gerardo Figueroa took up the research challenge. After finding a superior alternative to hard hats in such spaces, he began spreading the word: bump caps. On the outside, a bump cap resembles an elongated baseball cap with a short brim. Take a peek at the interior and you see squares of gray foam in a checkerboard pattern. This lightweight cap is the key to head protection in tight spaces; it stays on better when bending or leaning over and guards against cuts, bumps and bruises.

Figueroa originally ordered 250 bump caps for Capitol Building staff and visited each Capitol Building's shop safety briefing to discuss the new caps. There was modest adoption right away, and the caps began protecting team members like Johnson from minor hazards while working in small, dark spaces.

But not all Capitol Building employees are required to wear PPE to protect their heads. For example, Laborer Supervisor Ricardo Mitchell and Laborer Leader Wilbert Lowery venture up to the roof almost daily for their work. The steps they go up look more like a ladder than a flight of stairs, and there is a low beam running directly over the bottom step where they could bump their heads when climbing up or down. During the Dome rehabilitation project, the roof was a construction site, and Mitchell and Lowery were required to wear hard hats. They saw the advantage of wearing the head gear during their visits to the roof, so when construction was over instead of going back to uncovered heads, they switched to wearing bump caps on a regular basis.

Bump caps have become standard-issue PPE for all new Capitol Building employees, and you will regularly see employees wearing their bump caps all day because they are so comfortable and lightweight. These caps come in different styles, with options for longer or shorter brims and flame-retardant fabric (this is important when welding, for example).

Wearing a bump cap is a great example of the Architect of the Capitol's commitment to safety — one of the agency's core values. What examples of safe behavior do you practice in your daily work? Do you have any ideas for making the AOC a safer place? If you do, talk with your supervisor, your jurisdiction's safety and occupational health manager, or submit a suggestion to the SpeakUp! Program via email at speakup@aoc.gov. &





TOP: Capitol Building staff proudly sporting their bump caps (from left to right): Kristy Long, Vincenzo Lusi, Gerardo Figueroa, Brian Lindsey, Timothy Gross, Paul Probus, Clinton Johnson, Brent Dittman, Ricardo Mitchell and Wilbert Lowery. BOTTOM: Ricardo Mitchell and Wilbert Lowery inside the Dome, wearing bump caps to protect their heads from low beams and other hazards.

Communications and Congressional Relations U.S. Capitol, Room SB-16 Washington, DC 20515

The Architect of the Capitol strives to meet its mission 24 hours a day, 365 days a year to **serve** Congress and the Supreme Court, **preserve** America's Capitol, and **inspire** memorable experiences for all who visit the buildings and grounds.

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A mother duck stands guard over her ducklings, born near the U.S. Capitol this spring.

