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William Bell: Philadelphia photographer

Pitts, Terence Randolph, M.A.

The University of Arizona, 1987

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WILLIAM BELL: PHILADELPHIA PHOTOGRAPHER

by

Terence R. Pitts

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A Thesis Submitted to the Faculty of the

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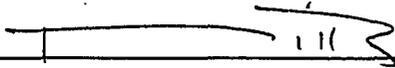
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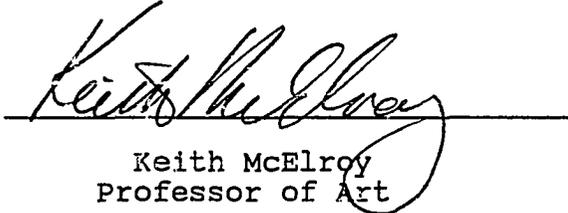
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TABLE OF CONTENTS

	Page
LIST OF ILLUSTRATIONS	v
ABSTRACT	vii
1. THE EARLY YEARS: EMERGING AS A PHOTOGRAPHER IN PHILADELPHIA, 1848-1865	1
2. WASHINGTON, D.C. AND THE ARMY MEDICAL MUSEUM, 1865-1868	12
3. THE RETURN TO PHILADELPHIA AND COMMERCIAL PHOTOGRAPHY, 1867-1872	26
4. THE WHEELER SURVEY, 1872	34
5. PROFESSIONAL PHOTOGRAPHY, 1873-1910	53
6. THE VIEW FROM THE TWENTIETH CENTURY	69
FIGURES	90
BIBLIOGRAPHY OF ARTICLES BY WILLIAM BELL	107
REFERENCES	109

LIST OF ILLUSTRATIONS

Page

1. J. BIEN (AFTER A PHOTOGRAPH BY WILLIAM BELL).
"RESULTS OF EXCISIONS OF THE HEAD OF THE
HUMERUS," CA. 1867 90
2. WILLIAM BELL. "CONSOLIDATED GUNSHOT FRACTURE
OF THE LOWER THIRD OF THE RIGHT FEMUR," 1865 . 91
3. WILLIAM BELL. "CONSOLIDATED GUNSHOT FRACTURE
OF LEFT FEMUR, FIRM UNION AFTER THE REMOVAL
OF LARGE FRAGMENTS OF THE SHAFT," 1865 . . . 92
4. WILLIAM BELL. "FACIAL PARALYSIS CONSEQUENT ON
SHOT INJURY," CA 1867 93
5. WILLIAM BELL. (VIEW OF THE U.S. CAPITOL), 1866 . . 94
6. WILLIAM BELL. "OLD TOMB OF WASHINGTON, MOUNT
VERNON, VIRGINIA," BETWEEN 1866 - 1874 . . . 95
- 7a. WILLIAM BELL. (PORTRAIT OF A WOMAN). CA 1869 . . . 96
- 7b. WILLIAM BELL. (PORTRAIT OF A MAN), CA 1869 . . . 96
- 7c. WILLIAM BELL. (PORTRAIT OF A WOMAN AND CHILD),
CA 1869 96
- 7d. WILLIAM BELL. (PORTRAIT OF A WOMAN), CA 1869 . . 96
8. WILLIAM BELL. "DR. JAYNE'S BUILDING, CARTER'S
ALLEY, MARCH 5TH," (NARROW VERSION), 1872 . . 97
9. WILLIAM BELL. "DR. JAYNE'S BUILDING, CARTER'S
ALLEY, MARCH 5TH," 1872 98

LIST OF ILLUSTRATIONS -- Continued

10. WILLIAM BELL. "LOOKING SOUTH INTO THE GRAND CANYON, COLORADO RIVER, SHEAVITZ CROSSING," 1872 99
11. WILLIAM BELL. "CANYON OF KANAB WASH, COLORADO RIVER, LOOKING SOUTH," 1872 100
12. WILLIAM BELL. "THE GRAND CANYON OF THE COLORADO, NEAR THE FOOT OF TOROWEAP VALLEY: A VIEW OF THE SOUTH WALL OF THE GORGE, AS SEEN FROM THE OPPOSITE BANK," 1872 101
13. WILLIAM BELL. "A PERCHED BLOCK OF SANDSTONE, WHICH IS BEING GRADUALLY UNDERMINED BY THE ACTION OF SAND AND WIND," 1872 102
14. WILLIAM BELL. (U.S. MINT, PHILADELPHIA), 1874 . 103
15. WILLIAM BELL. "MASONIC TEMPLE ON CHESTNUT STREET, BETWEEN 7TH AND 8TH STREETS, PHILADELPHIA, PENNSYLVANIA," CA. 1872 104
16. WILLIAM BELL. (SELF-PORTRAIT) CA. 1874 105
17. WILLIAM BELL. (VIEW OF A MANSION) 106

ABSTRACT

William Bell was an active photographer for more than a half century, successfully making the technical and commercial transitions from the daguerreotype process of the 1840s and 1850s to the collodion processes of the 1860s, 1870s, and 1880s, and finally to dry plate processes that dominated the medium from the mid-1880s until the time of Bell's death in 1910. The purpose of this thesis is to provide a biography of Bell (1830-1910), to assess his contributions to photography, and to suggest something of the growth of professionalism in nineteenth century photography using Bell as "typical."

THE EARLY YEARS:

EMERGING AS A PHOTOGRAPHER IN PHILADELPHIA, 1848-1865

Few nineteenth century photographers were more typical of the "rich harvest"¹ that the invention of photography promised than the Philadelphian, William Bell.

During his more than fifty years as an active professional, he successfully made the transitions from daguerreotypy to wet collodion photography to dry plate processes, all the while contributing to the growth of the profession through his published articles and professional memberships. By twentieth century standards, his career spanned a surprising range: studio portraiture, landscapes, medical and astronomical photography, architectural and railroad commissions, the photographic reproduction of paintings, and no doubt a few other as-yet-undiscovered areas as well. But within the context of nineteenth century professional - or commercial - photography, the breadth of Bell's experience and accomplishments was not

1. "Report of the Peers, Sitting on the 13th of July, 1839." Quoted in An Historical and Descriptive Account of the Various Processes of the Daguerreotype and the Diorama. (London: McLean, 1839; Kraus Reprint, 1969), p. 38.

atypical.

With the notable exception of some attention in Robert Taft's 1938 book, Photography and the American Scene,² Bell and his photographs were almost entirely forgotten from 1900 (the year of Bell's last published article) until the publication of Weston Naef's monograph, Era of Exploration: The Rise of Landscape Photography in the American West, 1860-1885,³ in 1975. But ten years after Naef's book, he is known almost exclusively for the photographs he made during the few months spent as Timothy O'Sullivan's replacement on the Wheeler Survey of 1872, and, in spite of considerable historical investigation into the photographers of the nineteenth century geological surveys, he is still widely mistaken for the similarly named photographer William Abraham Bell. Even a recent reference publication such as the Macmillan Biographical

2. Robert Taft, Photography and the American Scene: A Social History, 1839-1889. (New York: Macmillan, 1938).

3. Weston J. Naef and James N. Wood, Era of Exploration: The Rise of Landscape Photography in the American West, 1860-1885. (Buffalo and New York: Albright-Knox Art Gallery and the Metropolitan Museum of Art, 1975).

Encyclopedia of Photographic Artists and Innovators⁴

conflates the biographies of these two men into one confused entry.

The William Bell of Philadelphia is not the photographer, medical man, and railroad executive, William Abraham Bell (also occasionally referred to as Dr. Bell), who is principally remembered today as the author of New Tracks in North America, A Journal of Travel and Adventure Whilst Engaged in the Survey for a Southern Railroad to the Pacific Ocean During 1867-1868.⁵ The confusion has arisen not only because of the similarity in names, but also because of a few striking similarities in their careers. Both men were born in England and were "survey photographers" who worked in the American west and southwest at approximately the same time. William Abraham Bell, along with Alexander Gardner, accompanied the Union Pacific's Palmer-Wright-Calhoun Survey - which was searching for a route across New Mexico, Arizona, and California during 1867 and 1868 - as a photographer and

4. Turner Browne and Elaine Partnow, Macmillan Biographic Encyclopedia of Photographic Artists and Innovators. (New York: Macmillan, 1983), pp. 44-5.

5. William Abraham Bell, New Tracks in North America, A Journal of Travel and Adventure Whilst Engaged in the Survey for a Southern Railroad to the Pacific Ocean during 1867-1868. (London and New York: Welford & Scribner, 1869).

author. He also may have photographed a few years later in Kansas for the Kansas Pacific Railway.

William Bell was born in Liverpool, England, on September 4, 1830.⁶ At a young age William, his sister Caroline, and possibly a brother John came to Philadelphia.

They were part of a massive wave of tens of thousands of foreign-born who helped Philadelphia County's population grow from 138,961 in 1830 to 565,529 in 1860.⁷ In 1860, 168,556 (or 33%) of the county's population was, like Bell, foreign-born, and 22,398 of those had come from England.⁸

Their parents died from cholera shortly after their arrival and the children were split up and reared separately.⁹ William Bell was raised in Abington, just outside of Philadelphia, by a Quaker family named Mather, although Bell family history says that he ran away and became a cabin boy on a Mississippi River steamer. At the outbreak of war with Mexico in 1846, Bell signed up with

6. William Rau Haden, correspondence with the author, July 28, 1985.

7. Sam Bass Warner, Jr., The Private City: Philadelphia in Three Periods of its Growth. (Philadelphia: University of Pennsylvania Press, 1968), p. 51.

8. Ibid., p. 54.

9. William Rau Haden, correspondence with the author, June 26, 1985.

the Louisiana Volunteers. By early May, Congress had authorized President Polk to recruit 50,000 volunteers, and within two weeks the first companies of Louisiana volunteers were arriving in Texas and heading across the border.¹⁰ Nothing is known about his experience in Mexico.

Sometime within the ten-year period following the war with Mexico Bell was married to a woman whose name is known only as Mary and who bore him a daughter. On January 5, 1857, Bell entered into his second marriage with a woman from a New York state family, Louise Hans (b. November 7, 1833 - d. 1917), and later that year the first of their six children was born, a daughter named Louise. The other children were to be Ida (b. 1859), John (b. 1861), Harry (b. 1863), Joseph (b. 1873), and Dickinson Sargent (b. 1875).¹¹

Bell began his photographic career around 1848 as a daguerreotypist employed by John A. Keenan, who had apparently married his sister Caroline and who had a busi-

10. K. Jack Bauer, The Mexican War 1846-1848. (New York: Macmillan, 1974), p. 82.

11. William Rau Haden, correspondence with the author, June 26, 1985.

ness at 242 S. Second Street in Philadelphia.¹²

At the time, Philadelphia was still the scientific and intellectual center of the United States, supporting such institutions as the American Philosophical Society, the Academy of Natural Sciences, the Franklin Institute, the Library Company of Philadelphia, the University of Pennsylvania, and numerous leading hospitals.

From 1839 until the 1890's, Philadelphia also staked a good claim to being the country's photographic center, and was preeminent in optics, medical and astronomical applications, publishing, and more. In 1861, the Philadelphia-based Amateur Photographic Exchange Club was formed, which included such figures as Oliver Wendell Holmes and Titian Peale and was the first society in the United States devoted to amateur art photography. Throughout the century, Philadelphia was a leader in photographic exhibitions, from the U.S. Sanitary Commission Fair of 1864 to the Centennial Exposition of 1876 to the international salons of photography held well into the 1920s.

As a relatively new business without any tradition, the photographic profession was a frequent choice for the

12. McElroy's Philadelphia City Directory for 1849. (Philadelphia: E.C. & J. Biddle & Co., 1849).

unemployed, the immigrant, the amateur inventor or scientist, the artist, and, of course, the con man. With little capital, some effort, and some ingenuity, an individual could open his or her own business. Nineteenth century photographic establishments were usually small, entrepreneurial affairs. According to the 1860 Census of Manufactures, the average studio employed scarcely two people, while the manufacturing of photographic supplies sometimes reached the level of a small factory.¹³ During that same year American photographic establishments employed slightly more than 1,500 people and produced more than \$1,500,000 in goods.¹⁴ By 1880, these figures had quadrupled.¹⁵ Although by no means a major industry, photography stood uniquely at the juncture between art and science, between the amateur and the professional, between the dilettante and the businessman.

In October and November of 1851, Bell was one of nineteen photographers included in an exhibition at the

13. Manufactures of the United States in 1860; Compiled from the Original Returns of the Eighth Census. (Washington, D.C.: Government Printing Office, 1865), p. 739.

14. Ibid.

15. Report on the Manufactures of the United States at the Tenth Census. (Washington, D.C.: Government Printing Office, 1883), pp. 64-5.

Institute of American Manufactures, where seven of his daguerreotypes were shown.¹⁶ Since the catalogue lists his studio at 86 N. Second Street, and John A. Keenan at another address, it is clear that the two had separated company. In 1852, the first year that Bell himself was listed in a Philadelphia city directory, he was listed as a "Photographist" at 86 N. Second Street.¹⁷ Only one portrait from this period has been located - a sixth-plate daguerreotype of a seated man. Originally in the Arnold Crane Collection that was purchased by the J. Paul Getty Museum's Department of Photographs in 1984, the Getty was unable to locate this daguerreotype at the time this thesis was written. The velvet on the inside cover of this daguerreotype is embossed to read: "Jenny Lind Gallery/W. Bell/86 N. Second St. Phila." It is not clear whether Bell was an owner of the Jenny Lind Gallery or just a daguerreotype operator, but the fact that his name was placed on the daguerreotype case suggests that he might have been at least a part owner.

The association with the Jenny Lind Gallery did not

16. Catalogue of the Twenty-First Exhibition. (Philadelphia: Institute of American Manufactures, 1851), p. 18.

17. McElroy's Philadelphia City Directory for 1852. (Philadelphia: E.C. & J. Biddle & Co.).

last long, for by 1853 Bell was listed as a "daguerreotypist" at 168 S. Second Street. In 1854, whether through a desire to expand or a need to survive, Bell joined forces with Lybrand Clayton, who had a studio of "daguerreotype miniatures" at the southeast corner of Fifth and Chestnut Streets. For the years 1854 and 1855, the firm of Bell & Clayton used both addresses. In 1856, for reasons that are not known, Bell was not listed in city directories, and Clayton was listed as sole proprietor of the firm at Fifth and Chestnut. The partnership resumed again for one last year in 1857. In 1858, Bell gave up his location on Second Street and tried another partnership, this time with D. Biderman, who had a studio at 46 N. Eighth Street. But by 1859, the firm's name changed to Biderman & Scott, and Bell again dropped out of the city directories.

In either 1856 or 1859, the years that Bell doesn't appear in the directory, he may have briefly joined the photographic firm of James McClees, since, when Bell bought that studio in 1867, it was said by McClees himself that Bell had previously been an employee. In 1855, the firm of McClees and Germon, which had been formed in 1846, broke up and McClees went abroad to Europe to learn more about the

latest innovations in photography.¹⁸ In 1856 McClees reestablished himself at 160 Chestnut Street, later moving to 626 Chestnut Street from 1858-1860. McClees was a Pennsylvanian who had been born nine years earlier than Bell, in 1821. He advertised that "every known or useful style of photograph is produced" at the Chestnut Street studio, including daguerreotypes, stereo-daguerreotypes, ambrotypes, glass positive images, and various types of paper prints.¹⁹

In McClees's studio, Bell would have had the opportunity to become experienced in all of the major processes of the time (if he hadn't learned them already) and he would have been engaged in portraiture, architectural photography, and the copying of artworks, all of which McClees offered his customers.

Finally, in 1860, Bell established a business that was stable enough to allow him to operate alone from the same address for a number of years. He opened a studio at 1137 S. Ninth and, according to the city directories, kept it open until 1866, even though he wasn't in Philadelphia

18. Philadelphia: Three Centuries of American Art. (Philadelphia: Philadelphia Museum of Art, 1976), p. 350.

19. James E. M'Clees, Elements of Photography. (Philadelphia: James E. M'Clees, 1855), p. 5.

between 1862 and 1869.²⁰ This suggests that Bell's reputation in Philadelphia was sufficient to allow him to maintain a competitive studio even during prolonged absences.

20. References to Bell's Philadelphia studio addresses, 1853 through 1866, are from McElroy's Philadelphia City Directory (Philadelphia: E.C. & J. Biddle & Co., 1853-1866).

WASHINGTON, D.C. AND THE ARMY MEDICAL MUSEUM, 1865-1868

From 1860 to 1866 Bell was listed in the Philadelphia city directory as a photographer at 1137 S. Ninth Street, even though he didn't actually reside in the city between 1862 and 1869. In 1862, he had once again volunteered to do military service, signing up for a three-year stint with the First Regiment of the Pennsylvania Volunteers, a unit that would see action at Antietam, Gettysburg, and several other significant battles. At the end of his term Bell signed up for yet another three years of government service, but this time it was service of a non-military nature.

On February 22, 1865, Bell went to work for the Army Medical Museum in Washington, D.C., which had been founded in 1862 under the U.S. Surgeon General's office for the purpose of collecting "specimens of morbid anatomy, surgical and medical, which may be regarded as valuable; together with projectiles and foreign bodies removed, and such other matters as may prove of interest

in the study of military medicine or surgery."¹ The formation of the Army Medical Museum had been announced in May 1862, scarcely one month after William A. Hammond, M.D. had been appointed Surgeon General. By June 1862, Hammond had also announced plans to produce a Medical and Surgical History of the War of the Rebellion, assigning Joseph Janvier Woodward, M.D. and John Hill Brinton, M.D. to this task.²

As of late August 1863, the Museum was located in a building on H Street, NW, between Thirteenth and Fourteenth Streets, that was owned by W. W. Corcoran (who would later establish the Corcoran Gallery of Art elsewhere in the city), but which had been commandeered by the war-time government. The Museum was already actively collecting photographs of unusual medical cases and had officially requested that all field physicians send in "photographic representations of extraordinary injuries, portraying the results of injuries, operations, or peculiar amputations."³ By 1866, the Museum published a Catalogue

1. William A. Hammond, Circular No. 2. (Washington, D.C.: Surgeon General's Office, May 21, 1862).

2. William A. Hammond, Circular No. 5. (Washington, D.C.: Surgeon General's Office, June 9, 1862).

3. Ibid.

of the Surgical Section of the United States Army Medical Museum,⁴ which accounted for collections of 1,766 photographs from various sources, although this figure has been questioned as too low.⁵

In his memoirs, Brinton, who was curator of the museum from its inception until he was replaced by George Alexander Otis in 1864, described the operations of the museum's various artists:

The machinery to carry on the Museum was very simple. A full photographic outfit and the employment of a corps of artists was ... ordered about this time [i.e. 1863], and did notable service on illustrating the museum specimens. Artists were obtained by enlistment as hospital stewards, and were assigned duty in the Surgeon General's office at the best pay a headquarters' detail could give. I had at this time a topographical artist to draw the maps for the history of the war, one or two water colorists, who could also paint in oil rapidly if required, and the bone-preparers, the Schafhererts, father and son. At a later period, just before I left the Surgeon General's office, the services of one or two photographers were obtained, and a studio and workroom was established at the Army Museum building.⁶

4. Catalogue of the Army Medical Museum. (Washington, D.C.: Surgeon General's Office, 1863), p. 5.

5. Stanley B. Burns, "Early Medical Photography in America (1839-1883): VI. Civil War Medical Photography," New York State Journal of Medicine (August 1980), pp. 1454-6.

6. John H. Brinton, Personal Memoirs of John H. Brinton. (New York: Neale Pub. Co., 1914), pp. 188-9.

Bell was one of those Hospital Stewards assigned to the photographic department, which had been set up in the yard of the museum. For reasons that aren't clear, the first Hospital Steward/photographer, a man named Wills, apparently was not satisfactory, and upon Bell's arrival he was made Bell's assistant.⁷ The other professional photographer at the museum then was Edward J. Ward. In addition to these professional photographers, several of the Museum's physician/curators were accomplished medical photographers and much of the fame of the museum's photographic work was due to the accomplishments of the pioneer medical photography of Dr. Joseph Janvier Woodward and Dr. George Alexander Otis. Dr. Woodward, for example, was largely responsible for making the United States a leader in photomicrography and he pioneered in the use of artificial light in making photomicrographs.

American physicians had been using photography for medical purposes since the late 1840's, largely as a way of "collecting" and sharing with other physicians specimens of diseases, wounds, mental states, and methods of treatment.

In 1860, probably the earliest article printed in America on medical photography appeared in the New York Medical

7. Daniel Smith Lamb, "History of the Army Medical Museum." Unpublished typescript, Otis Historical Archives, Armed Forces Medical Museum, Armed Forces Institute of Pathology, Washington, D.C., p. 25.

Journal: "The Application of Photography to Medical Science, Including a Direct Process to Photograph the Microscopic Field" by Ransford E. Van Gieson, M.D.⁸

It was the Civil War that really spurred on the rapid development of a professional medical photography in the United States, eventually bringing it into international prominence. In the North alone, for example, there were over 375,000 deaths from battle and disease, over 275,000 wounded, and more than 6,000,000 reported cases of disease in all.⁹ And the purpose of the Army Medical Museum was to document the medical experiences, experiments, and advances of this tragedy for the benefit of medical research.

In the same year that Bell joined the Army Medical Museum, enough photography had already been done that the Army Medical Museum published a volume entitled Reports on the Extent and Nature of the Materials Available for the Preparation of a Medical and Surgical History of the Rebellion, which contained a number of non-photographic

8. Ransford E. Van Gieson, "The Application of Photography to Medical Science, Including a Direct Process to Photograph the Microscopic Field," New York Medical Journal 8 (1860), no pagination.

9. Stanley B. Burns, "Early Medical Photography in America (1839-1883): VI. Civil War Medical Photography," p. 1447.

illustrations copied from photographs and photomicrographs.¹⁰ Bell's primary responsibility, according to the editors of the Philadelphia Photographer, who visited him approximately one year after he had started, was "to photograph shattered bones, broken skulls, and living subjects, before and after surgical operations have been performed upon them."¹¹ The photographs made by the staff appeared in the numerous publications of the Army Medical Museum - works such as the eight volumes of albumen photographs in the archives of the Otis Historical Archives of the Armed Forces Institute of Pathology (formerly the Army Medical Museum) and now called Photographs of Surgical Cases and Specimens (these images were apparently not gathered into albums until the mid-twentieth century), several important publications on amputations at the hip joint,¹² and the

10. Joseph J. Woodward, Circular No. 6, War Department: Reports on the Extent and Nature of the Materials Available for the Preparation of a Medical and Surgical History of the Rebellion. (Philadelphia: J.B. Lippincott, 1865.)

11. "Government Photography," Philadelphia Photographer 2:31 (July 1866), p. 214.

12. George A. Otis, Drawings, Photographs and Lithographs Illustrating the Histories of Seven Survivors of the Operation of Amputation at the Hip Joint, Together with Abstracts of these Seven Successful Cases. (Washington, D.C.: Surgeon General's Office, 1867). This publication contains several albumen photographs by Bell and was also issued as Circular No. 2, July 16, 1869, Report on

two volume Medical and Surgical History of the War of the Rebellion (published between 1870 and 1883).¹³

The latter series, which was issued in six parts totalling approximately six thousand pages in length and which is still found on the shelves of government depository libraries, contains credited photographs by Ward and Bell in a variety of processes: woodburytype, heliotype, and lithography. In addition, the pages of each part include several hundred engravings, most of which were done after photographs (Figure 1). In fact, this publication was clearly conceived with the idea that photography would play an integral role in its design and content. The Medical and Surgical History of the War of the Rebellion was a major contribution to the visual resources of medicine and was the centerpiece of the Army Medical Museum's publishing efforts. Numerous copies of its volumes were given away to medical libraries and leading physicians by the Surgeon General's Office.

There is no method of distinguishing Bell's personal contribution from that of the other members of the museum's photography staff since the individual

Amputations at the Hip Joint in Military Surgery, with lithographs in place of photographs.

13. The Medical and Surgical History of the War of the Rebellion. 2 volumes in 6 parts. (Washington, D.C.: Government Printing Office, 1870-1883).

photographer was rarely identified on the mounts of original photographs. (The photographer was credited usually only upon the publication of an image.) Bell was a contract employee and a member of what might be called a photographic "team" there. Even contemporary accounts by visitors to the museum's photographic department do not fully clarify the question of Bell's importance. For example, in the article that resulted from the Spring, 1866 visit by the editors of the Philadelphia Photographer mentioned above, Bell was the center of attention.¹⁴ But when the same magazine reported on "Photography in Washington" in their July 1867 issue, Bell was not even mentioned in the discussion of photography at the Museum. Instead, credit is given to Dr. George A. Otis, the curator, who, "with his photographic assistants, has permitted photography to assume a very great and important part of the work there."¹⁵

In the hundreds of medical photographs that Bell and Edward Ward made - and medical photography historian Stanley B. Burns has stated that they were responsible for "more clinical medical photographs in the 1860 to 1885 era

14. "Government Photography," p. 214.

15. "Photography in Washington," Philadelphia Photographer 4:43 (July 1867), p. 234.

than any other American photographers"¹⁶ - we can see that the photography department worked under conditions that were roughly equivalent to an average portrait studio, although they worked with considerably fewer props. In fact, the standard mid-nineteenth century portrait clearly provided the prototype for much of the work done at the Army Medical Museum.

The vast majority of the photographs made at the Army Medical Museum were medical portraits of soldiers who had survived battle wounds or various diseases (although the caption labels, which often described a lengthy history of patients' treatments, occasionally indicate that the patient died at a date later than the making of the photograph). In most cases, the photographs that Bell and his colleagues made (particularly after the end of the war) did not document freshly received wounds, but the varied results of surgery, infection, inattention, etc., since the soldiers that visited the Army Medical Museum usually did so weeks, months, if not years after being wounded. Two important types of medical photography do not appear in any of the hundreds of existing images: photographs of surgery in progress and of cadavers. The

16. Stanley B. Burns, "Early Medical Photography in America (1839-1833): VII. American Medical Publications with Photographs," New York State Journal of Medicine (July 1981), p. 1252.

probable reasons for the lack of such images is that the Army Medical Museum was not associated with a hospital, and the field hospitals, which provided most of the subjects, were instructed to send in only the affected limbs and/or bones, rather than entire bodies.

Almost all of the photographs that were made of living soldiers were three-quarter or full-length portraits taken against a blank, neutral background, accompanied by the most simple of props: chair, table, rug, mirror (Figures 2 and 3). The soldiers, most of whom still wore at least part of their military uniform, were usually photographed in whatever normal portrait pose would best display their wound and, at least in some of the cases, preserve their dignity - even to the point of occasionally using a large fig leaf to cover male genitals. On at least two occasions, in volume 4 of Photographs of Surgical Cases and Specimens, the fig leaf was later drawn onto the prints (Figure 3) even though the very same images can be found unaltered in a one-volume album entitled Photographic Studies that is also in the Otis Historical Archives. Each of the photographs in the volumes called Photographs of Surgical Cases and Specimens have typeset captions (sometimes as long as a substantial paragraph) that were pasted onto the backs of the mounts of these cabinet card-sized images, detailing the nature of the wound, the

treatment, and the results.

It is apparent from Bell's medical photographs that he was technically proficient and sufficiently adept at solving the numerous studio problems that arose in the museum to produce consistently satisfactory photographs from a clinical point of view. And occasionally, his images serve as portraits of great clarity - haunting images of pride, humiliation, and despair (Figure 4). As documentary photographs, the images made by Bell and his colleagues provide a corollary body of work to the two better known types of Civil War imagery: commercial studio portraits of soldiers and scenes of the battlefield dead. The work done in the photographic studios of the Army Medical Museum provide us with what is possibly the best view of the survivors of the Civil War.

It is probable that Bell and the doctor/photographers visited the library of the Surgeon General, which was in the same building as the museum and which held 1,800 volumes in 1865 and more than 25,000 by 1873. During the Civil War, this library, which later became the foundation of the present National Library of Medicine, held several volumes containing medical photographs, including Mecanisme de la Physionomie Humaine, published in 1862 and containing many photographic plates by Guillaume Duchenne de Boulogne that could have served as prototypes

for Bell's work.¹⁷ The strong interest in France in medical photography during the 1860's probably accounts for the publication by the Army Medical Museum of a French-language volume of American medical photographs, Guerre des Etats-Unis 1861-1866, Chirurgie Conservatrice, Photographies, containing examples of Bell's work.¹⁸

In addition to medical photography, Bell was regularly called upon to photograph dignitaries who passed through the Army Medical Museum and the Surgeon General's office, although none of these photographs has ever been identified.

Bell also apparently made a number of documentary landscape views of "the late battlefields," according to the editors of the Philadelphia Photographer,¹⁹ a fact that is confirmed by the first historian of the Army Medical Museum, D. S. Lamb.²⁰ The purpose of these images, made in the company of Dr. R. B. Bontecou of Harewood General Hospital in Washington, D.C., is not clear,

17. Guillaume Duchenne de Boulogne, Mecanisme de la Physionomie Humaine ou Analyse Electro-Physiologique de l'Expression des Passions. (Paris: J.B. Balliere, 1862).

18. Geurre des Etats-Unis 1861-1866, Chirurgie Conservatrice Photographies. (Washington, D.C.: Army Medical Museum, no date).

19. "Government Photography," p. 214.

20. Daniel Smith Lamb, "History of the Army Medical Museum," unnumbered page.

nor have any examples been located. Since the Philadelphia Photographer reported that these were "very interesting negatives (historically),"²¹ we can speculate that they may have been intended for a report or document of some kind. Dr. Bontecou was a surgeon in the U.S. Volunteers, like many of the surgeons associated with the Army Medical Museum, and he also made his own clinical photographs of his patients at Harewood (a number of which he deposited at the Army Medical Museum and which are still in the Otis Historical Archives).

In April, 1865, after having been on the job only a few months, Bell had a hand in a most unusual undertaking: the printing of 1500 copies of portraits of several of President Lincoln's assassins. These photographs were produced for use on "wanted" posters that were handed out.

On April 20, Edwin M. Stanton, Secretary of War, issued posters offering up to \$100,000 for the capture of John Wilkes Booth, and two of his accomplices, John H. Surratt and David E. Herold. The usefulness of the poster must have been minimal, however, since Herold (whose name was misspelled on the poster) is represented by a portrait that depicted him as a schoolboy, while Surratt is represented

21. "Government Photography," p. 214.

by the portrait of someone else altogether.²² There is a special irony in the fact that this task was given to the photography staff of the Army Medical Museum. After Ford's Theater, the site of the Lincoln assassination, became a government building, opening officially to the public in April 1867, the third floor became the home of the Army Medical Museum.

22. Robert Selph Henry, The Armed Forces Institute of Pathology: Its First Century, 1862-1962. (Washington, D.C.: Office of the Surgeon General, 1964), p. 47.

THE RETURN TO PHILADELPHIA
AND COMMERCIAL PHOTOGRAPHY 1867-1872

While Bell worked at the Army Medical Museum, he apparently practiced some photography that was not related to his job, although only two photographs that were taken in or around Washington, D. C. have been located so far.

One is an architectural view that can be found reproduced across from the title page of the July 1867 issue of the Philadelphia Photographer: a view by Bell of the almost completed U.S. Capitol building and the last remaining scaffolding (Figure 5). Bell's "beautiful architectural specimen" was published as a substitute because an unspecified accident had befallen the photograph submitted by William Notman.¹ The editors of the magazine saw a number of Bell's views of the Capitol and Bell himself described how they came to be:

On the 12th of September, 1866, Mr. L.E. Walker, photographer Treasury Department, being engaged taking large negatives of the Capitol, by his kindness enabled me to make use of his materials and

1. "Our Picture," Philadelphia Photographer 4:43 (July 1867), p. 231.

conveniences, and also gave me his valuable aid.

The negatives were taken with a six-inch Globe [lens]; exposure forty-five seconds; time of day, between ten and half past eleven o'clock; a cloudless sky; light, regular.... 2

The remainder of Bell's statement dealt with the chemical formulas used to prepare the collodion plates and to develop them. Walker, who had been in charge of the photographic section in the office of the Treasury Department's Supervising Architect since June 1857,³ would later be responsible for introducing Bell to Lt. George M. Wheeler, an introduction that provided Bell with the remarkable opportunity to travel west as a geological photographer.

The other photograph possibly made during Bell's Washington period is a stereo card owned by The Library Company of Philadelphia, entitled "Old Tomb of Washington, Mount Vernon, Va." and which is labelled as being part of a series of "American Scenery" (Figure 6). The reason that this image cannot be conclusively ascribed to Bell's Washington, D.C. years is that Bell's "American Scenery" series photographs all bear the address 1200 Chestnut

2. "Our Picture," Philadelphia Photographer 4:43 (July 1867), p. 231.

3. "Official Architecture - Importance of the Photographic Branch," Philadelphia Photographer 7:1 (January 1876), p. 13.

Street, and Bell almost certainly did not own a studio at that address until sometime in 1869.

The vantage point that Bell chose to use in the photograph of the site of Washington's Tomb is slightly unusual in that the tomb itself is scarcely visible. Rather, the ambience of the American hero's final resting place is conveyed by the curve of the hill and the graceful upward movement of the trees.

Whether or not either of these efforts were part of any attempt to make photographs on a commercial basis in Washington, D.C. independent of his work at the Army Medical Museum cannot be determined. The Washington, D.C. city directories list Bell as a photographer for the Surgeon General's Office and only give a home address for him (first 371 New York Avenue, NW, then the corner of Greene and Gay Streets, Georgetown). It is certainly conceivable that Bell could have been developing a series of views of important historical and architectural sites as early as his years in Washington, or even that he might have been contributing views anonymously on a commission basis to some publisher's list of views. During the 1860's it was quite common for photographers and photographic publishing houses to carry such series, many of them being remarkably similar in subject to each other.

On February 22, 1868, Bell's three-year term at the Army Medical Museum expired and he returned to Philadelphia. He was about thirty-eight years old, and he had his wife and four children between the ages of five and eleven to support. In spite of the fact that he was a professional photographer with twenty years of experience he probably needed to reestablish himself and find ways of being commercially competitive in a city that was full of photographers. There were more than fifty studios in operation in Philadelphia in 1868, some of which were large, long-standing operations, such as those of James Cremer, W. L. Germon, Frederick Gutekunst, Edward Hipple, Frederick Langenheim, James E. McClees, and Samuel Root.

In 1867, seemingly anticipating his return to Philadelphia, Bell had apparently purchased the studio of his former employer, James McClees, at 1200 Chestnut Street, an address he would keep until 1875.⁴ This not only would have provided him with a location and equipment, but also with a clientele and perhaps even some staff. At the same time, he was becoming more active professionally in both the Pennsylvania Photographic Association and the Photographic Society of Philadelphia. He began submitting articles for publication in journals,

4. "Obituary: James E. McClees," Philadelphia Photographer 24:300 (June 1887), p. 373.

such as the Philadelphia Photographer and the annual Photographic Mosaics. His contributions were generally short, technical pieces - rarely exceeding a page in length - that concerned matters of interest to the professional photographer: "Improved Albumen Process for Opalotypes," "Recovery of Gold from Used Solutions," "To Work and Keep a Nitrate Bath Neutral," etc.⁵ Just from his articles alone, one can see the varied commercial nature of Bell's photography business. Two articles deal with different aspects of retouching negatives, one discusses the tinting of prints, and another discusses copying photographs.

His bread and butter work during this time was probably portraiture, and so any commercial gimmick that he could employ or promote that would lead the public to his door might have made the difference between success and bankruptcy. One of the ways in which mid-nineteenth century studio photographers stimulated business - however temporarily - was to claim an improvement on an existing process or to invent a new one (or at least what would appear to public eyes to be a "new" and "improved"

5. William Bell, "Improved Albumen Process for Opalotypes," Philadelphia Photographer 6:62 (February 1869), pp. 43-4; "Recovery of Gold from Used Solutions," Philadelphia Photographer 6:71 (November 1869), p. 369; "To Work and Keep a Nitrate Bath Neutral," Photographic Mosaics vol. 5 (1870), pp. 80-1.

process). How well this actually succeeded in attracting customers is not known, but the practice was so pervasive that it is clear that the photographers were convinced even if the public was not. The articles and advertising pages of magazines like the Philadelphia Photographer are crowded with photographers' claims for new, improved, and superior processes. And lacking a successful improvement or invention of their own, photographers could always become exclusive agents in their own town for products and processes originating elsewhere, which is what William Bell did in 1869.

The October 1869 issue of the Philadelphia Photographer reported that Bell had become the Philadelphia agent for the newly patented "porcelain" photograph process. The magazine's editors noted:

They have been named the "Porcelain" photograph, for they not only retain all the softness and delicate rotundity, which renders the photograph upon porcelain so charming and attractive, but they possess the advantage of being made on paper.... We are told they can be produced with but little additional trouble or skill, and no more expense than the ordinary photograph, and so we imagine that our readers will hail with gratification the advent of "something new" to offer their patrons.⁶

Four of Bell's carte-de-visite portraits employing

6. "Editor's Table," Philadelphia Photographer 6:70 (October 1869), p. 356.

the porcelain process are in the collection of the International Museum of Photography. They exist on two different types of mount. The mount that evidence suggests is the earlier of the two has "Bell, Photographer" as well as "'Porcelain' Photograph. Fowx's Patent, April 29, 1869" (or, alternatively, "'Porcelain' Photographs") on the lower part of the front of the card, and has the following inscription printed on the verso: "E.G. Fowx's Patent, 'porcelain' photographs, Beautiful, New. Bell, Photographer, 1200 Chestnut Street, having the sole right to make this beautiful style of picture" (Figures 7a and 7c). One of these was hand-dated on the verso by an unknown hand: "About Nov. 8th or 12th, 1869" (Figure 7c).

The version that seems to be somewhat later lacks any printed information at all on the front of the card, although the caption on the verso is the same as on the version mentioned above (Figures 7b and 7d). One of these has been hand-dated by an unknown hand: "October 10, 1870 (Figure 7d).

The four carte-de-visite portraits are typical ones for the time. Two were printed in such a manner that no background at all appeared and the bodies fade away into a vaguely oval shape reminiscent of traditional, commercial portrait painting. The other two - perhaps more interesting because of the lack of vignetting - are

straightforward portraits of a young woman in one case and of a mother and baby in the other. None of the four images reflects any particularly unusual or innovative approach to what must have been mundane work, although the full portrait of the young woman (Figure 7d) has a compelling directness to it, in part because the sitter seems closer to the camera than is typically found in portraits of this type.

Only two other photographs from the Philadelphia years before Bell joined the 1872 Wheeler Survey have been found: two stereo cards showing the ice-covered facade of "Dr. Jayne's Building" after a fire that occurred on March 5, 1872 (Figures 8 and 9). They are pleasing and somewhat dramatic solutions to a difficult problem. The narrowness of the alley precluded a complete frontal view of the burnt-out building, so Bell opted for an angled view down the alley that shifted the emphasis from the architecture to the strange, massive ice floe that resulted from the efforts of the firefighters. One of the images is particularly striking because of its deep perspective and the convincing sense of three-dimensionality that one has when this view is seen through a stereoscope (Figure 8).

THE WHEELER SURVEY, 1872

On June 17, 1872, Lt. George M. Wheeler, who was in charge of the War Department's "Geographical and Geological Explorations and Surveys West of the One Hundredth Meridian," wrote to Bell:

Mr. Walker of this city, has given me your name as one, whose services might be made available as photographer on exploration in Utah, the Colorado plateau & the Grand Canon [sic] of the Colorado, during the coming season. If I recollect right Mr. Walker told me, that he either had some conversation or correspondence with you on the subject, and that you had expressed willingness to join my parties; we propose starting from there the 1st prox.

Should you entertain the idea, I should be glad to see you either in person, or to receive your answer by return of mail, for the purpose of furnishing you the necessary details regarding compensation, and other matters. (Original punctuation retained throughout.) 1

Bell obviously accepted immediately, for on June 25th Wheeler wrote him again, saying: "Your appointment

1. Lt. George M. Wheeler to William Bell, 17 June 1872. Beinecke Rare Book and Manuscript Library, Yale University.

agreed upon. Come at once."²

Wheeler had conceived of the idea of a major Western survey while working as an assistant engineer on the U.S. Army Corps of Engineers's survey of Pt. Lobos, California and vicinity during the late 1860's. Wheeler's recommendation that the Army conduct a systematic survey of the entire West won quick support, in part because of military jealousy over the popular excitement caused by the three recently created civilian surveys: the Geological and Geographic Survey of the Territories under Ferdinand V. Hayden; the Geological Exploration of the Fortieth Parallel under Clarence King; and the Geographical and Geological Survey of the Rocky Mountain Region under John Wesley Powell. But also, Wheeler's proposed survey would not concentrate on geology as the civilian surveys were doing.

Wheeler, instead, stressed mapping. Accurate topographical maps would provide the Army with required military data, as well as information about mines and minerals, potential routes for roads and railroads, and other economic aspects of Western life - whether present or future.

Wheeler's first official survey had been conducted

2. Lt. George M. Wheeler to William Bell, 25 June, 1872. Beinecke Rare Book and Manuscript Library, Yale University.

in 1871, with Timothy O'Sullivan as the field photographer. The 1871 Survey had explored parts of Utah, Nevada, California, and Arizona, making a dangerous boat trip upstream through a portion of the Colorado River. O'Sullivan proved himself not only an excellent survey photographer, producing some of the most haunting images of the American West ever made, but he also served as a capable and trustworthy group leader for Wheeler. But during the Spring of 1872, when continued Congressional funding began to seem doubtful, Wheeler allowed O'Sullivan to be transferred to Clarence King's Geological Survey of the Fortieth Parallel. By the time that Wheeler finally succeeded in obtaining an appropriation, O'Sullivan was out West with King.

In spite of the fact that Bell had no experience as an expeditionary photographer, he was a somewhat logical choice. From a bureaucratic point of view he would have been a desirable choice since he was a recent employee of the War Department, under which the Wheeler Survey was operating. L. E. Walker, chief photographer for the Treasury Department, the man who recommended Bell, was his friend and had photographed with him and would therefore have known of Bell's technical prowess. Furthermore, Bell had been out West during the war with Mexico (although admittedly that was sixteen years earlier), he was a mature

veteran of two wars, and he had some landscape experience.

But, as Bell himself later indicated, even all of this was not enough to guarantee success on the Wheeler Survey.

"The experience of a field photographer near cities," he wrote, "and always under shelter with abundance of water, is but a small trial of his abilities to [sic] that he may experience accompanying an exploration party."³

The 1872 expedition assembled at Fort Douglas, Utah, near Salt Lake City, in mid-July. In the July 27th issue of the New York Herald, a reporter outlined the program for the season and described briefly the make-up of the hundred or so members of the party: one-quarter were members of the Survey staff, one-quarter were packers and mule drivers, while the remaining half comprised the cavalry escort.⁴ Shortly after this, the party split up into two main groups and headed out. Bell's party, as Wheeler had already outlined in his letter to him of June 17, traveled south through central Utah, explored the Colorado Plateau and the North Rim, descended into the Grand Canyon at several spots, and returned north through Utah in time to catch a train back East, probably in early

3. William Bell, "Exploration Field Photography," Photographic Mosaics (1874), p. 48.

4. "Wheeler's Expedition," New York Herald 27 July 1872, p. 3.

December.

Not too surprisingly, Bell's earliest known report from out West concentrated on the status of commercial photography there. Published in the October 1872 issue of The Photographic World, his "Correspondence from the Far West" painted a grim picture of commercial photography in Utah. "To photographers in the East," he wrote, "who would like hard work and very little trade, this Utah Valley would be a paradise."⁵ He noted that "it is only within a short time back that the photographers here have received money for their work, they having had to take pay for photographs in molasses, wheat, hogs (and carrots yet ungrown, often lost through bad crop), or anything to barter with."⁶ For Bell, the main enemies were dust, water, and temperature:

[There are] clouds of alkali dust that penetrate everywhere, alkali water, hot and dry atmosphere, so that it is almost impossible to flow a 10 x 12 inch plate with more than two grains of cotton to the ounce of collodion without its setting in ropes or cords over the plate; and in consequence of the small amount of cotton in the film, the negatives develop up without any printing density, which necessitates a great amount of development, so that

5. William Bell, "Correspondence from the Far West," The Photographic World 20 (October 1872), p. 296.

6. Ibid.

every negative made is a monument of care and labor.⁷

Bell did not seem to much like the daily routine of the Survey. In the letter to The Photographic World he wrote: "I will say nothing of the daily experiences; the daily marches, burning sun, blustering wind, accompanied with its clouds of alkali dust; the mule riding, packing and unpacking the working material from the mule on whose back the collodion, bath, &c., have been churned for hours; one is almost hopeless for a successful negative."⁸ Nevertheless, he added that he had "obtained some grand ones, that go far to repay the anxiety and labor had in making them," and, somewhat prophetically, he concluded by saying: "My real work will be on the Colorado."⁹

While Bell may not have been ready to tell the readers of The Photographic World all about his "daily experiences," a few weeks later he was more than willing to provide a fuller description to the readers of the Philadelphia Photographer:

7. Ibid.

8. William Bell, "Correspondence from the Far West," The Photographic World 20 (October 1872), p. 296..

9. Ibid.

I rise at 4 a. m.; feed the mule; shiver down my breakfast; mercury at 30 degrees, candle dim, cup and plate tin; my seat the ground. After breakfast I roll up my bedding, carry it to the property line to be loaded on a pack mule, and by that time it is broad daylight. If negatives are to be taken on the march the photographic mule is packed with darktent, chemical boxes and camera, and out we start ahead of our exploring party on the lookout for views.

Having found a spot from whence three to four can be had, we make a station, unpack the mule, erect the tent, camera, etc.... Having got all we can here, everything is repacked. Meanwhile the whole party have passed on and are several miles ahead.

We start again, and repeat our work at another station, which, when done, brings us late in the day, and eight to ten miles in the rear of the main party. We endeavor now to reach camp in good season, but it is generally about dark and very cold. Arriving in camp we water, unsaddle, and feed the mules; then to supper; and, if it is not one's turn on guard, make our bed and retire, with our loaded carbine and pistol handy. 10

Bell used two cameras, both of which probably belonged to the Survey: a large plate camera that produced glass-plate negatives about 8 by 11 inches in size, and a stereoscopic camera for making 5 x 8 inch negatives that produced a pair of stereoscopically matched images approximately 5 x 4 inches apiece. In the annual report for the year, Wheeler later somewhat misleadingly wrote that Bell had "successfully used the dry-plate process

10. William Bell, "Photography in the Grand Gulch of the Colorado River," Philadelphia Photographer 10:1 (January 1873), p. 10.

with negatives prepared by himself, and is worthy of commendation for his interest and industry in his attempt to perfect this process."¹¹ But since Bell by his own accounts used the wet collodion process, we can probably assume that he was actually using one of those hybrid or transitional processes that Robert Taft has referred as the "moist" processes. Such a process would have retained its light sensitivity longer than normal collodion (which had to be used while still wet), thus allowing Bell to extend the time that he had between coating a plate and making an exposure.

There is no evidence to suggest that Bell had ever before used a camera as big as the Survey's large plate camera in the field, and the results he obtained with it are somewhat technically uneven. Several of his large views have flaws in the collodion and he frequently seemed to have had trouble controlling exposure times (Figure 10). From my own inspection of his original glass plate negatives, which are now in the National Archives, Bell's large plates required a good bit of retouching, particularly in the sky areas, where an unblemished white tone was difficult to obtain. In a number of instances,

11. George M. Wheeler, Progress-Report upon Geographical and Geological Explorations and Surveys West of the One Hundredth Meridian in 1872. (Washington, D.C.: Government Printing Office, 1874), p. 11.

the full horizon line, delineating the difference between sky and earth, has been entirely clarified through the use of retouching.

Oddly enough, nearly every one of Bell's large-plate views are vertical, when, by my estimate, about ninety per cent of Timothy O'Sullivan's large plate images for the Wheeler Survey are horizontal. Bell's tendency toward verticality may be due to the fact that the formats that he used in his commercial photography - carte-de-visite, cabinet card, stereoview - were inherently vertical themselves. Nevertheless, there is a raw energy in his large-plate images that is often lacking in the smaller stereoviews, especially when he stood on the edge of the Grand Canyon and conveyed the sense of vertigo that one feels at such heights. Some of his loveliest and most subtle images, however, are those made from the bottom of the canyon floors. Here, Bell seemed more at home: the space was crowded and vertical, the light softer, and the shift from foreground to background not so abrupt (Figure 11).

In late November, Bell's group found itself camped in southern Utah within a few miles of part of John Wesley Powell's expedition party. On the 21st, Bell visited the camp of the rival survey and looked at the negatives that Powell's photographers had made. According to one of the

photographers, Walter Clement Powell, Bell "pronounced them fine" and invited them to visit him the following day.¹²

The next day, Powell wrote in his journal: "Bell showed us how to develop dry plates; do not like the process as well as the wet. Showed us his views; there is too much bare glass to make them first-class. Admired his dark-tent and the conveniences he had for taking pictures."¹³

Bare glass, of course, is the result of underexposure and will result in a totally black area on the print (Figures 10 and 11). Without knowing to which negatives Powell was referring, it is impossible to make any assessment of his statement. Certainly to many modern eyes, it is often those areas of complete blackness that lend Bell's images a powerful expression. But the Powell group's admiration for Bell's photographic paraphernalia is in keeping with the feeling that one gets from reading the many articles that Bell wrote about improving the photographic process without ever mentioning the "artistic" or "aesthetic" side of his profession.

When the two groups met again a couple of days later, photography was forgotten. "We had a jolly good

12. Walter Clement Powell, "Journal of Walter Clement Powell," Utah Historical Quarterly 16-17 (1948-9), pp. 472-3.

13. Ibid.

time drinking wine, smoking and cracking jokes," Powell noted. "At last we bade them 'Au Revoir' and hoping to meet them at Salt Lake. Pitched quoits all afternoon."¹⁴

The evidence of Bell's images suggest that he was more comfortable with the smaller stereo camera, although many of his landscapes are oddly claustrophobic. The space that is often emphasized in these images is depth, not breadth. The depiction of a seemingly endless space often receding toward a distant, unbroken horizon that we have come to associate with nineteenth century landscape photography in the American West is largely absent in Bell's work. Here, the sky is severely restricted or eliminated altogether, and his pictures are usually constructed around diagonals that run from one or both of the upper corners toward the middle of the image.

Bell skillfully, if somewhat repetitiously, divided most of his stereoviews into several distinct planes: often a nearby, jutting foreground, a sharply isolated middle ground, and a distant background (Figure 12). These three planes are often jarringly discontinuous, giving anyone who looks at them through a stereoscope a strong sense of three-dimensional depth. The broad, flat, uninterrupted vista of the American West seems to have been antithetical

14. Walter Clement Powell, "Journal of Walter Clement Powell," pp. 473.

to Bell's style of stereo imagery.

If three-dimensionality is one of the prominent photographic techniques common to Bell's landscapes of the West, scale is the other. In dozens of his images, he places one or more human figures (including himself) or some other indication of human scale, such as a hat or a blanket (Figure 13).

In addition to providing a human entry into his photographs through the use of people and their belongings, Bell may well have been responding to Wheeler's own philosophy on the role that photography played in surveys such as his. On at least one occasion, Wheeler expressed serious doubts about photography's ability to be a convincing substitute for reality. "Photography," he wrote in the Annual Report for 1872, "assists us somewhat in gathering ideas of local forms, but fails entirely to impress one with the grandeur of the shapes and details of coloring expressed in nature."¹⁵ Wheeler felt that photography could be used in areas where one is "obliged to leave the field of exact science," principally in the service of geology and natural history because of "the special value that comes from a geological series of

15. George M. Wheeler, Progress-Report upon Geographical and Geological Explorations and Surveys West of the One Hundredth Meridian in 1872, p. 39.

photographs [which] results in the determination of a relative comprehension of the size and contour of the rock-beds and of the general features of the topography of the country."¹⁶ Wheeler went on to suggest that "should we, by the application of skilled labor and the refinement of instruments, be able to give a value to the horizontal and vertical measurements upon a photographic picture, at once the subject changes and an addition to positive data is gained."¹⁷ Wheeler's obsession with measurement was so strong that he included (or had included) a specific and appropriate measurement as part of the caption for approximately half of all of the Wheeler Survey photographs taken during 1871 through 1874.

In addition to believing that photography could provide the depiction of relative sizes, Wheeler felt that photography was best at depicting general features. In the captions that were provided for Wheeler Survey photographs, the words "characteristic" and "typical" were used repeatedly: "a typical plateau edge," "a typical scene," "a typical view," "a characteristic section," etc.

The source of the captions to the Wheeler Survey photographs and the freedom which Bell exercised over the

16. Ibid., p. 11.

17. Ibid.

choice of how and where to make photographs is not certain.

As we have seen, Wheeler seemed to describe two different types of photographic activity that he felt important: images of geological or topographic importance and "typical" images. The geological staff of the Survey clearly directed Bell's photography when it came to the geological and topographical images, although Bell may well have quickly learned what interested the geologists, since on at least one occasion G.V. Gilbert, the Survey's head geologist, acknowledged that he had written confidently about the geology of an area that he had not visited, but which Bell had photographed for him. Presumably, Bell had more freedom on the selection of "typical" images, particularly around the Grand Canyon, where the captions often contain no geological information at all, but simple indications of location and direction of view.

In the field, just after developing a plate, Bell himself probably scratched the number that can be seen in all of his Survey photographs into the negative. This number presumably corresponded with a log of some sort, since the captions are often quite detailed. But, judging by the geological emphasis and knowledge exhibited in the captions, it would appear that the geologists probably supplied most of the captions.

Sometime in December 1872, Bell returned east, though it is not known whether he returned directly to Philadelphia or to Washington, D.C. If he did accompany the government-owned negatives back to the capitol, he did not spend much time there, since he lectured to the Pennsylvania Photographic Association on his Wheeler Survey experiences and showed some of the resulting images on March 17, 1873, scarcely three months after the close of the 1872 Survey season. (The published report of the meeting notes that Bell's "description of the difficulties are certainly sufficient to deter any wet-plate worker from expecting good results from such a trip," although "his results were very interesting, and pleased all who were present."¹⁸ There is no evidence whatsoever to suggest that Bell ever had the opportunity to print from his own Wheeler Survey negatives as there appears to have been someone in the Office of the Chief Engineer (possibly assigned to Wheeler) to provide all the prints needed by the government.

The 1872 photographs went into circulation almost immediately. On January 30, 1873, Brigadier General Humphreys of the Office of the Chief Engineer authorized Wheeler to make the expenditure of \$250 "in the preparation

18. "Pennsylvania Photographic Association," Philadelphia Photographer 10:112 (April 1873), p. 116.

of a series of photographs" for departmental uses.¹⁹ And in another memo bearing the same date, Humphreys authorized another \$250 for the duplication of photographs from the 1871 and 1872 seasons "for the Viennese Exhibition,"²⁰ meaning the Vienna Universal Exposition, which opened May 1, 1873. The American section, which was organized by Francis A. Stout, Vice-President of the American Geographical Society, included 63 of Bell's large plate views and 121 of his stereo views. On June 11, 1873, yet another set of 1871 and 1872 views were forwarded to another fair, this time the Louisville Industrial Exposition in Kentucky.²¹

The major American showing of the Wheeler Survey photographs came at the Centennial exhibition in Philadelphia in 1876, where many of the photographs taken between 1871 and 1874 were displayed in the building devoted to the U.S. Executive Department. There, at least some of the photographs were shown with extensive captions

19. Brigadier General Humphries to Lt. George M. Wheeler, 30 January 1873. In "Letters Sent 1873" of the War Department General Records Division. U.S. National Archives and Records Service.

20. Ibid.

21. J.G. Foster, Office of the Chief Engineer, to E.A. Maginness, Superintendent of the Louisville Industrial Exposition, 11 June 1873. In "Letters Sent 1873" of the War Department, General Records Division, U.S. National Archives and Records Service.

that described the scene and importance of the site for the layperson.²² The descriptions were full of geological explanations, geographical descriptions that often included much reference to the colors of things depicted, and various types of encouragements for the potential western settler. As in all of these government sponsored exhibitions of the Survey photographs, the catalogue and captions made no references to the photographers, although the photographer's name was always included on the printed information that was on each photograph's mount.

The photographs of the Wheeler Survey were made into three different final products: albums of large plates (apparently always numbering either twenty-five or fifty plates), loose large plates, and several stereocard series.

Stereocards were published both by the government and by E. & H.T. Anthony of New York, the latter receiving permission to print for general sale stereo images of 1871 and 1872 for a royalty of \$5.00 per gross.²³ In addition, the photographs were often turned into lithographs by government-commissioned lithographers for some of the

22. Report of the Board on Behalf of United States Executive Departments at the International Exhibition Held at Philadelphia, Pa., 1876. (Washington, D.C.: Government Printing Office, 1884), vol. I, pp. 362-6.

23. J.G. Foster, Office of the Chief Engineer, to Lt. George M. Wheeler, 16 December 1873. U.S. National Archives and Records Service.

annual and final reports.

Unfortunately, we have little evidence of the reception that Bell's photographs received at the time. As has already been mentioned above, the Pennsylvania Photographic Association found them "interesting" and pleasing.²⁴ Dr. H. C. Yarrow, one of the Survey's scientists published a short account of the 1872 season in the American Journal of Science, in which he mentioned "a valuable gallery of photographic views secured from the Grand Canyon of the Colorado, as well as from Utah, by Mr. William Bell, a skilled photographer of Philadelphia."²⁵ An unsigned review of the annual report for the 1872 Survey appeared in The Overland Monthly in July 1875. Remarking that the plates "were executed by the photo-lithographic process, they must necessarily be true to nature, and may be depended upon as conveying to the mind a vivid and faithful impression of the original."²⁶ Apparently the author felt that it was necessary to make a statement of this nature before pronouncing that, "judging by the

24. "Pennsylvania Photographic Association," Philadelphia Photographer 10:112 (April 1873), p. 116.

25. Dr. H.C. Yarrow, "Explorations West of the 100th Meridian," American Journal of Science 105:28 (April 1873), p. 290.

26. "Current Literature," The Overland Monthly 15:1 (July 1875), p. 110.

plates contained in this pamphlet, the Grand Canyon of the Colorado presents many views far more gloomy and awe-inspiring, if not so grand, than anything to be seen in the valley of the Yosemite."²⁷

Bell undoubtedly would have agreed with the adjectives "gloomy and awe-inspiring." In an article written after his return to Philadelphia, Bell openly spoke about his lack of enthusiasm for the lifestyle of the survey photographer: "...when, after a dusty, scorching day's mule-riding, [the photographer] finds himself in the bosom of a canyon, whose walls of 1200 to 2000 feet encircle him, lulled to sleep by the coyote howls, he will, when home again, appreciate it."²⁸ And he went on to warn future survey photographers that "those whom they are under want not failures, but success." ²⁹

27. Ibid., p. 111.

28. William Bell, "Exploration Field Photography," Photographic Mosaics (1874), p. 49.

29. Ibid.

PROFESSIONAL PHOTOGRAPHY, 1873-1910

Having completed his work with the Wheeler Survey, William Bell returned to Philadelphia and took up his old studio at 1200 Chestnut Street. In the mid-1870s he became increasingly active in photographic societies, including the Photographic Society of Philadelphia, the Pennsylvania Photographic Association, and the National Photographers Association. He gave at least two lectures during 1873, one before the Pennsylvania Photographic Association on March 17, 1873, and another on December 3, before the Photographic Society of Philadelphia, when he "exhibited a series of city views."¹

While presentations by members and invited guests of recently photographed views from locations near and far were part of many photographic society meetings at the time, the predominant efforts of these societies were directed at sharing, evaluating, and experimenting with the latest chemical and technical advancements in the field of photography, particularly new lenses and dry plate processes. The proliferation of photographic

1. "Society Gossip," Philadelphia Photographer 11:121 (January 1874), p. 18.

journals during the last half of the nineteenth century created an international network out of the scores of societies that existed in the United States, Europe, and elsewhere. For example, on January 7, 1874, Bell spoke before the Photographic Society of Philadelphia in support of "an instantaneous process by Mr. Duchochois [a French photographer], in which the pyroxylin is so treated as to remove all traces of nitro-glucose."²

In 1874, Bell was offered a position as a photographer on the government's 1874 Transit of Venus Expedition, but he declined and instead recommended William Rau (b. January 19, 1855 - d. November 19, 1920) as his substitute.³ (Rau would later become Bell's son-in-law, marrying Louise Bell on November 15, 1877.) The transit of the planet Venus across the face of the sun offered astronomers a variety of opportunities for experiments, and in the last quarter of the nineteenth century the occasion of a transit always involved a number of photography-related projects. Nevertheless, Bell did have some involvement with the expedition, because on October

2. [Report of the January 7, 1874 meeting of the Photographic Society of Philadelphia], Philadelphia Photographer 11:122 (February 1874), p. 60.

3. Untitled biographical statement on William H. Rau submitted to the American Museum of Photography by D. Sargent Bell, now in the Siple Collection files, International Museum of Photography, George Eastman House.

17, 1874, he spoke before the Photographic Society of Philadelphia "on the keeping qualities of dry plates; he reported that some plates of his own manufacture had accompanied the Transit of Venus Expedition," and he discussed the generally successful results obtained with them.⁴

In late 1874 and throughout 1875, we only hear of Bell through two more appearances before the Photographic Society of Philadelphia, where he "exhibited some very excellent negatives, made by the coffee dry process"⁵ and where he "exhibited an experimental dry plate, which had been preserved with Kennett's Gelatin Pellicle."⁶ One stereographic image made by the coffee dry plate process exists in the collection of The Library Company of Philadelphia. It is a view of the U.S. Mint at Juniper and Thirteenth Streets in Philadelphia (Figure 14). On the verso of the mount is handwritten: "May 22, '74, Coffee Dry Plates, Bell Photog, 1200 Chestnut St., Phila." Like his

4. [Report of the October 7, 1874 meeting of the Photographic Society of Philadelphia], Philadelphia Photographer 11:131 (November 1874), p. 13.

5. [Report of the December 2, 1874 meeting of the Photographic Society of Philadelphia], Philadelphia Photographer 12:133 (January 1875), p. 13.

6. [Report of the March 4, 1875 meeting of the Photographic Society of Philadelphia], Philadelphia Photographer 12:136 (April 1875), p. 100.

earlier stereo images of Philadelphia buildings, this image was photographed from a forty-five degree angle from the front entrance, so that we are given a partial view of both front and side facades. Furthermore, in order to avoid a row of trees that lined the sidewalk in front of the mint, the image was photographed from a height above street level, probably a second-story window.

A similar image is a view of the Masonic Temple on Philadelphia's Chestnut Street, built in 1855 (Figure 15).

Bell's stereographic view of it was made from the same angle and from the same elevation above street level. This view bears the label of "American Scenery, Bell, Photographer, 1200 Chestnut St." on the verso of the mount, which helps us date the image between the years 1869 and 1874, which were the years that Bell occupied a studio at that address. In this view we can even see a sign and a blurred banner hanging from the facade of the building across the street from the temple, the building where Bell made this image. Given the narrowness of Chestnut Street, on which both the Masonic Temple and the U.S. Mint stood, Bell's angular vantage point was the only one that would allow his image to encompass the entire breadth of these buildings. In addition, the quickly receding street provides a strong stereoscopic effect - especially in the view of the temple - that would be

totally lacking in a frontal view.

One final image bearing the address of 1200 Chestnut Street, and thus falling in the time period of 1869 to 1874, is a carte-de-visite self-portrait, showing the approximately forty year-old Bell with his typical bushy moustache, mutton-chop beard, and hat (Figure 16). Bell depicted himself as a rather intense, and slightly dapper man.

We next see Bell at the International Exhibition of 1876, held in Philadelphia in celebration of the centennial of the United States. His Wheeler Survey photographs of 1872 were on display in one of the buildings housing displays by various departments of the U.S. government. In addition, there was a modest-sized "Photographic Exhibition Building" in which were shown 272 displays of photographs and photographica of all types by American photographers. (Foreign photographers generally exhibited in the buildings of their own nations.) Nearly all of the major names of the day were represented: Mathew Brady, E. & H.T. Anthony, Charles Bierstadt, Carleton Watkins, Bradley & Rulofson, Marcus Aurelius Root, and John Moran, to name just a few of the notable studios and individual photographers. William Bell and William Rau, apparently having gone into business

together, displayed "Stereoscopic views from dry plates."⁷

In spite of the brevity of the entry, the five word description of their display is nevertheless revealing. Whereas other photographers were showing "Photographic views, California" (Carleton Watkins), "Stereoscopic views, Yosemite Valley" (J.J. Reilly), or even just "Photographic views," Bell and Rau were the only photographers who felt that the specific process that they used (i.e., dry plates) was worth mentioning in the name of their display.

A brief mention in the Philadelphia Photographer offers us little more information about the stereo photographs that Bell and Rau exhibited at the International Exhibition of 1876, except to praise the process by which they were made. "Bell, of Philadelphia, [displayed] a frame of dry plate views. They are sharp and free from that harshness we usually see in views made by the dry process. Mr. Bell has with great perserverance brought this troublesome process under control."⁸

This seems to suggest once again that Bell was

7. United States Centennial Commission, International Exhibition, 1876 Official Catalogue. Part II: Art Galleries, Annexes, and Outdoor Works of Art. Department IV - Art. (Philadelphia: John R. Nagle & Co.), p. 140.

8. M.P. Simons, "The Grand Display of Photographs at the World's Fair," Anthony's Photographic Bulletin 7:8 (August 1876), p. 241.

largely respected by his colleagues for his technical abilities rather than any artistic skills. It is therefore not too surprising to learn that Bell and Rau were not among the approximately 33 American award winners in photography, which included J.W. Black ("Commended for Arctic views"), Thomas Houseworth ("Commended for artistic excellence of landscape photographs"), and Carleton Watkins (also "Commended for artistic excellence of landscape photographs"). Among the nearly seventy foreign award winners were Julia Margaret Cameron, Francis Bedford, Henry Peach Robinson, William Notman, Felice Beato, and Frank M. Good.

Since awards were given to photographic exhibits regardless of the building that housed them (Bell's photographic associate from the Army Medical Museum, Dr. J.J. Woodward, received an award for his micro-photographs, which were displayed in a building devoted to official U.S. government) it seems apparent that both Bell's and O'Sullivan's Wheeler Survey photographs could have been considered for awards but were passed up.⁹

Bell reportedly was involved in one other

9. All information and quotations regarding photographic awards at the International Exhibition of 1876 are from: United States Centennial Commission, International Exhibition, 1876: Reports and Awards: Volume II. Groups XXI-XXVII. (Washington, D.C.: Government Printing Office, 1880), pp. 682-691, 717-723.

photographic activity at the International Exhibition of 1876. Several of his obituaries noted that "he made for Mr. Gutekunst the largest negative of the Centennial Exposition."¹⁰ The photograph mentioned is a panoramic view measuring approximately two feet in height and ten feet in length of the Centennial grounds themselves. (All known examples are framed, so only an estimate of size can be given. The visible portion of the photograph at the Library Company of Philadelphia measures 17" by 121", while the overmat measures 23" by 127".) This photograph was touted as being the largest photograph on a single sheet of paper, the qualification being required since an Australian photographer, Bernhard Otto Holtermann, was also exhibiting at the Centennial a panorama of Sidney harbor, which was more than thirty feet long but had been printed on several sheets of photographic paper.¹¹

Why Bell's obituaries give Bell a role in the making of the Gutekunst panorama is not clear. The problem is that there is no mention of Bell in the several articles relating this photograph, nor is there mention of Bell anywhere on the copy at the Library Company of

10. "William Bell," Philadelphia Ledger January 30, 1910, page unknown.

11. "The Largest Photograph in the World," Anthony's Photographic Bulletin 7:3 (March 1876), pp. 92-3.

Philadelphia, which is annotated in several spots.

Written on the lower right hand corner of the copy at the Library Company is "F. Gutekunst, Photog.," while "Print by L. Gutekunst" appears on the lower left hand corner. Annotations on the mat read: "The largest photograph in the world on one sheet of paper, printed from seven negatives" and "Copies presented to the President of France, Queen of England, Emperors of Austria, Brazil, & Japan, & Kings of Italy, Netherlands, & Spain." This information corresponds to an account of the photograph given by John R. Clemmons before the Philadelphia Photographic Society on December 7, 1876. Clemmons described how he had albumenized a single sheet of paper twenty inches high and ten feet seven inches long using the albumen of 125 eggs. The final image was then made by contact printing seven 22 by 18 inch glass negatives.¹²

A short review published in the Philadelphia Photographer of the photograph clearly ascribes the printing once again to Frederick Gutekunst's brother Louis, which the reviewer felt was "first class in every respect, excepting that necessity perhaps compelled the use of the same cloud negative twice, which somewhat

12. "Society Gossip," Philadelphia Photographer 14:157 (January 1877), p. 17.

marred the grandest print ever made by photography."¹³

It is possible, of course, that Bell either assisted Frederick Gutekunst in the exposure of the seven negatives of the centennial grounds or that he might have printed one or more of the other versions that were given away. When Frederick Gutekunst himself discussed the print at the January 14, 1877 meeting of the Philadelphia Photographic Society, he took all of the credit himself, referring only to some assistants.¹⁴

After the Centennial, William Bell drops out of our sight until 1878, when he apparently did some photography for the Pennsylvania Railroad, although nothing is known about this experience.¹⁵ In 1882, he agreed to become one of the U.S government photographers to work for the 1882 Transit of Venus expedition. Bell was assigned to Santa Cruz, Patagonia, in what is now southern Argentina just across from the Falkland Islands. On December 6, Venus passed directly across the sun and the expeditionary photographers, who were stationed around the world, used

13. F.M. Spencer, "Scattered Thoughts," Philadelphia Photographer 14:158 (February 1877), p. 46.

14. "Society Gossip," Philadelphia Photographer 14:158 (February 1877), pp. 47-8.

15. Untitled interview by Louis Walton Siple with D. Sargent Bell, Siple Collection Files, International Museum of Photography, George Eastman House.

collodion emulsion dry plates to record the transition.¹⁶

On March 7, 1883, Bell described his South American experiences before the Photographic Society of Philadelphia.¹⁷

In 1884, Bell spent the summer photographing for the Kentucky State Geological Survey. As Bell put it in an article that he wrote for the Philadelphia Photographer: "The work consisted in visiting one county, then another, and so on, until nearly all the counties in the state had been photographed."¹⁸ Bell was only one of several photographers working on the Survey that summer, photographing farms, livestock, timber, and other aspects of rural and agricultural life.

Bell spent most of his article of nearly a page and a half (his longest published text) describing the results of using dry gelatine plates. He noted that:

Having always relied upon wet plates for fine work, I had my doubts whether any could equal wet-plate results, and I still have them, but the great

16. Record Group 78: Records of the Naval Observatory, Bureau of Navigation. U.S. National Archives and Records Service.

17. John C. Browne, History of the Photographic Society of Philadelphia. (Philadelphia: Photographic Society of Philadelphia, 1884), n.p.

18. William Bell, "A Summer in Kentucky with Gelatin Plates," Philadelphia Photographer 22:266 (February 1885), p. 51.

difference in the ease in using the two processes makes one lean toward the dry, and forget that they are not up to the standard, besides many subjects were had that would have been impossible with our old friend collodion. 19

At the time that Bell wrote his article for the Philadelphia Photographer in February 1885, some of his Kentucky images were on display at the New Orleans World's Industrial and Cotton Centennial Exposition, which had opened in December, 1884, in the form of enlarged glass transparencies that had been built into a type of glass house that was the Kentucky State Exhibit. Unfortunately, none of Bell's Kentucky photographs have been found and all of the nineteenth century records of the Kentucky Geological Survey have been destroyed in two different fires.

This 1885 article, entitled "A Summer in Kentucky with Gelatine Plates," also contains a significant statement from Bell on artistic photography:

I would say a few words to my brother photographers. It is not the ten-dollar outfit worked as a machine that we need fear, but the ten-dollar outfit worked by an artist. While he produces a negative very seldom technically as perfect as we professionals, yet his poor photograph is more acceptable than our finer results. We need not seek far for the cause - want of artistic perception on the part of the professional. Artists

19. Ibid., p. 52.

in wet-plate times avoided photography; it was too hard work, fearfully dirty, etc. But these being removed by the dry, artists, in large numbers, are using photography, and producing work that makes a candid operator wish that his work had more of the artistic element than photographic excellence.

I hope that we all will improve in that particular in which we are most deficient. 20

In the January 2, 1886 issue of the Philadelphia Photographer it was announced that "Mr. Wm. Bell, the well-known Philadelphia photographer, is now Professor of Photography at the Lehigh University, Bethlahem, Pa. He has a large and interested class, and is competent to teach."²¹

Throughout the next decade, Bell wrote occasional technical and professional articles for Wilson's Photographic Magazine, the International Annual of Anthony's Photographic Bulletin, and Photographic Mosaics.

In 1892, in preparation for the Columbia World's Fair to be held in Chicago in 1893, Bell travelled abroad to Europe and Russia, photographing paintings that were to be lent to the Fair. For a catalogue that was to be published by George Barrie & Son, he made 10 by 12 inch negatives of important art works in "almost every capital

20. Ibid., pp. 52-3.

21. "Editor's Table," Philadelphia Photographer 23:265 (January 2, 1886), p. 30.

in Europe,"²² but the high duties imposed by U.S. Customs on the negatives forced Bell to give up his negatives and the catalogue was eventually produced from negatives made by another photographer after the paintings had been finally assembled in Chicago.²³

Apparently the only prints to have survived from the years after the Wheeler Survey of 1872 are a set of four views - probably commissioned - of a mansion in the Philadelphia area. These albumen views, which are signed "Bell Photo Philada" are now in the collection of the Library Company of Philadelphia (Figure 18).

Near the end of his career, in one of his last published articles, Bell suggested - perhaps not totally seriously - that a return to the Daguerreotype process would end what he saw as the commercial photographer's endless search for "'exclusive' specialities."²⁴ Even though he recognized that platinum was the favorite process at the time, he felt that the carbon print was a better process since it produced good enlargements and

22. William Bell, "A Ticklish Experience Abroad," Photographic Mosaics 34 (1898), pp. 170-1.

23. Untitled interview by Louis Walton Siple with D. Sargent Bell, Siple Collection Files, International Museum of Photography, George Eastman House.

24. William Bell, "Past and Present," Photographic Mosaics 35 (1899), p. 210.

fine detail. Predicting that the albumen process would one day be revived, he condemned the gelatin silver process as good only for process work and for "galleries catering to the low-price, glossy picture patronage."²⁵

The final three decades of William Bell's half century of professional photography were in some ways the most diverse years of his career, and yet the lack of identifiable photographs that have survived from this period prohibit us from making any generalizations about Bell as an image-maker after 1872. Nevertheless, it can be said that the evidence suggests that Bell's reputation as a trustworthy and proficient professional photographer capable of handling nearly any type of assignment continued to grow throughout this period. At the same time, we have seen evidence of Bell's contributions to the professionalization of photography and to the chemical improvement of some of its processes.

In a brief statement published in the 1888 edition of the International Annual of Anthony's Photographic Bulletin, Bell answered the question "How Shall Success Be Secured?" and stated the essence of his own approach to photography: "There is more in one minute seeing a thing done (with explanation) than one hour's hearing of how it

25. Ibid., p. 211.

ought to be done, or in any written description of how to do it. Carry the lesson home with you and try again, and success will come."²⁶

On January 28, 1910, after a long illness, William Bell died. Obituaries appeared in a number of Philadelphia newspapers, where he was eulogized as a veteran of two wars and a noted photographer. But his death went unnoticed in the photographic journals of the day. It would be 1938 before the name of William Bell would reappear in print in connection with his more than fifty year career as a photographer.

26. William Bell, "How Shall Success Be Secured?" International Annual of Anthony's Photographic Bulletin 1 (1888), p. 87.

THE VIEW FROM THE TWENTIETH CENTURY

Other than a rare reproduction or passing mention, William Bell has been treated in 20th-century photographic literature exclusively as a landscape photographer of the American West, solely because of the six months that he spent in 1872 with the Wheeler Survey. And even the amount of attention that has been paid to his Western landscape photographs must be described as sparse. Yet in spite of the lack of attention that has been paid to him by 20th-century photographic historians, he (like Timothy O'Sullivan) seems to fall at the crux between art and science, between the existing tradition of studio art photography and the newly evolving tradition of the documentary photograph. For this reason, if for no other, it is profitable to outline the reactions that various photographic historians have had to his work.

When William Bell died in 1910, the only obituaries were published in the newspapers of Philadelphia; the photographic world took no notice. Bell's name lay in total obscurity until 1938, when pioneer photographic historian Robert Taft mentioned him briefly in his

Photography and the American Scene. "Bell," he wrote, "was one of the few expeditionary photographers during wet plate days to employ a dry process, very probably the tannin process."¹ Bell's western landscapes do not seem to have struck a responsive chord with Taft or the two other men who were shaping the American foundations of photographic history in the late 1930s - Ansel Adams and Beaumont Newhall.

Both Adams and Newhall had opportunities to place Bell within the history of photography, and both opted not to do so. On January 12, 1937, Adams, having been invited by Newhall to participate in the exhibition at the Museum of Modern Art, "Photography 1839-1937," wrote to Newhall:

It is a collection of original prints, chiefly by a man named O'Sullivan, taken in the Southwest about 1870. A few of the photographs are extraordinary--as fine as anything I have ever seen....

The negatives are, of course, "wet" plates, and the results achieved are all the more startling when one remembers that the physical difficulties of processing the plates must have been enormous. 2

1. Robert Taft, Photography and the American Scene. (New York: Macmillan, 1938), p. 306.

2. Ansel Adams to Beaumont Newhall, 12 January 1937. Ansel Adams Archive, Center for Creative Photography.

photographer and was interested enough to reply on January 15 that he would indeed like to borrow the album. On January 20, Adams wrote Newhall that he would forward the album with "markers at the pages on which the best pictures are displayed....As usual, in any work of this kind, there are many pictures of no value at all - but the few marvelous ones will justify the display of the book."³

The album that Adams offered Newhall was a twenty-five print album covering the 1871, 1872, and 1873 seasons of the Wheeler Survey, which contained fifteen albumen photographs by O'Sullivan and ten by Bell. (The album was later donated by Adams to the Museum of Modern Art. A second, identical album, which was also acquired by Adams at some point, was later donated to the Center for Creative Photography.) For his exhibition, Newhall settled on the now famous plate from the album, "Ancient Ruins in the Canyon de Chelley, New Mexico," 1873.⁴ No mention of Bell was made by either man, and, although quite a few 19th-century photographers of the American west have appeared in Newhall's five editions of The History of Photography, William Bell has never been mentioned.

3. Ansel Adams to Beaumont Newhall, 20 January 1937. Ansel Adams Archive, Center for Creative Photography.

4. Beaumont Newhall, Photography 1839-1937. (New York: Museum of Modern Art, 1937), p. 105.

In 1940, Adams himself turned curator, selecting an exhibit entitled "A Pageant of Photography" for the Department of Fine Arts of the Golden Gate International Exposition in San Francisco. Adams hailed O'Sullivan as one of the precursors of straight photography and referred to the photographs of O'Sullivan, Carleton Watkins, and William Henry Jackson as the work of "hardy and direct artists."⁵ But once again, the name of William Bell was absent.

In his "Introduction" to the catalog A Pageant of Photography, Adams made perhaps the first serious attempt to define an aesthetic of 19th-century western landscape photography. In several places on the first page alone (directly across from a reproduction of O'Sullivan's 1873 photograph, "Ancient Ruins in the Canyon de Chelley, New Mexico", the same photograph singled out by Newhall) Adams uses the adjectives "simple," "incisive," "direct," "honest."⁶ And he notes that "the collection of early Western photographs is perhaps one of the most important phases of the exhibition."⁷ One of the most remarkable things for Adams about these "vigorous pioneers" was the

5. Ansel Adams, A Pageant of Photography. (San Francisco: San Francisco Bay Exposition Co., 1940), n.p.

6. Ibid.

7. Ibid.

physical and technical difficulties that they had to overcome, a factor that led to Adams's main and final point: "No time or energy was available for inessentials in visualization or completion of their pictures."⁸ This aesthetic stance allowed Adams to lay an historical groundwork for the prominent role in contemporary photography that he gave to "the magnificent work of Stieglitz, Strand, Weston, and others who have assumed the responsibility of continuing a simple, incisive statement by means of the camera."⁹

By locating the roots of an American photographic aesthetic in simplicity, directness, and honesty, Adams was echoing a view of American art that stretched from Horatio Greenough to Lewis Mumford, a view that decried over-ornamentation and slavish copying of Old World aesthetics. Instead, to paraphrase Greenough, in a truly American aesthetic form and function would merge seamlessly. At the same time, there appears in Adams's essay an undercurrent that equates art with masculinity, that links idealism with physical achievement, and that exalts the manly virtues of fortitude and perseverance.

Bell's technical failures in some of the large plate

8. Ibid.

9. Ibid.

photographs that he made for the Wheeler Survey (Figure 10) and his tendency to overexpose some of the brilliantly-lit areas of his images undoubtedly did not endear his work with Adams. (The twenty-five print Wheeler album includes several prints made by Bell from poorly coated plates.) At the same time, Bell's sometimes almost scientific studies of Western geology and his subtle images of the light and rock walls of the Grand Canyon were far from Adams's ideal of American grandeur and the heroic scale of the West. O'Sullivan's Wheeler Survey photographs, on the other hand, were technically brilliant, contained a much more continual tonal range, and depicted an American West of immense, beautiful, and rugged space.

In the first and second editions of his history of photography, published in 1937 under the title Photography 1839-1937 and in 1938 under the title Photography: A Short Critical History, Newhall never discussed or reproduced Western landscape photography. (The O'Sullivan image of the ruins of Canyon de Chelly was the only photograph of this genre even to be included in the 1937 exhibition). O'Sullivan was mentioned only briefly under Newhall's discussion of the photography of the Civil War, and although Newhall referred to the great difficulty of using

wet collodion plates and of the "inhuman objectivity"¹⁰ of the Civil War documentary photographs of Matthew Brady, Alexander Gardner, O'Sullivan, and others, he did not, like Adams, suggest that they were precursors to the "straight" photography of the 20th-century.

It was not until the mid-1970s, more than one hundred years after the 1872 Wheeler Survey, that Bell was finally given some serious attention in Era of Exploration: The Rise of Landscape Photography in the American West, 1860-1885, by Weston J. Naef, in collaboration with James N. Wood. It was this 1975 book and exhibition, along with The Documentary Photograph as a Work of Art: American Photographs, 1860-1876, a catalog and exhibition organized by Joel Snyder and Doug Munson in 1976, that first attempted to create coherent methodologies for the aesthetic and art historical appreciation of photographs made in the 19th-century for non-art purposes.

In the book by Naef and Wood, although Bell was not one of the five photographers accorded individual chapters - the five were Carleton Watkins, Timothy O'Sullivan, Eadweard Muybridge, Andrew Russell, and William Henry Jackson - his photographs were discussed and reproduced a number of times as part of their effort to develop a

10. Beaumont Newhall, Photography 1839-1937. p. 50.

relationship between geologic theory and 19th-century landscape photographs of the American West.

Part of the thesis put forth by Naef and Wood was that the Western landscape photographers - particularly O'Sullivan, Bell, and Watkins - were to a large extent illustrating the geologic theories of the day - predominantly those of Clarence King and Samuel F. Emmons.

King's theory of "catastrophism," which suggested that geologic occurrences were often violent and abrupt, was in direct contrast to the then-accepted notion of "uniformitarianism," which held that geologic change was a slow process that occurred uniformly over time. In the reading by Naef and Wood, Emmons's theory of "mechanical" geology suggested that "all changes in the earth's surface take place through movement, which includes the movements of elevation and subsidence in the earth's surface, of volcanic flows, and of water."¹¹

In spite of the fact that Bell paid close attention to geologic and geographic realities in his photographs, which would seem to prove the point being insisted upon by Naef and Wood, they nevertheless often make many patently

11. Weston J. Naef and James N. Wood, Era of Exploration: The Rise of Landscape Photography in the American West, 1860-1885. (Buffalo: Albright-Knox Art Gallery and New York: Metropolitan Museum of Art, 1975), p. 59.

weak comments in their effort to demonstrate that Bell (like the other photographers discussed) was simultaneously seeking geological truths and personal aesthetic statements. Using as one example a large, greatly eroded natural formation near Rocker Creek, Arizona, called Perched Rock (Figure 13), which Bell had photographed both as a large plate and a stereoview, Naef and Wood suggested that even though wind erosion was a type of energy not originally included in Emmons's theory, "Bell doubtless photographed the rock as evidence for the theory being pursued by several geologists at once" [presumably Emmons as well as King].¹² (Emmons, it should be mentioned, was a member of Wheeler's 1872 Survey.) Nevertheless, Naef and Wood noted, "this does not mean that Bell visualized the rock any less intently than if he had chosen it himself. Perched Rock is a powerful natural icon that communicates on many different levels, as do all successful works of art."¹³

Bell - like O'Sullivan - was obviously briefed by one or more members of the Wheeler Survey about what types of things were important to photograph. Nevertheless, Bell's own descriptions of his typical day seem to suggest

12. Ibid., p. 59.

13. Weston J. Naef and James N. Wood, Era of Exploration, p. 59.

that he and perhaps a photographic assistant often went off from the main party for hours on end, searching for sites that they believed to be of geological and visual interest where, for efficiency's sake, several views might be made before all the equipment had to be repacked and moved again. So while we know that Bell's instructions were to photograph scenes and monuments of geologic interest, we have no evidence that would inform us of how Bell was influenced in his choice of views or vantage points in any particular image. In other words, we have no verifiable method of locating which photographic decisions were Bell's.

While Bell - much more than O'Sullivan - concentrated on the landscape (only two or three of Bell's photographs are not landscapes, while O'Sullivan made many images that cannot be classified as landscapes), there are some obvious differences between their approaches to the subject of landscape, and Naef and Wood suggested that a comparison between the two photographers was instructive:

If O'Sullivan's sensibility was more akin to King's, Bell's esthetic was well suited to the role Wheeler had intended for photography. Bell preferred dramatic viewpoints and extreme spatial juxtapositions; figures, when they appeared, served to illustrate man's awe of nature. 14

14. Weston J. Naef and James N. Wood, Era of Exploration, p. 131.

Bell, it should be remembered, did not seem to enjoy his Wheeler Survey experience very much. He felt unprepared for the photographic hardships, the daily routines, and the harsh land and weather. Where O'Sullivan's photographs seem to mirror his own exploratory, pioneer nature, Bell's viewpoint often seems to be that of a transient photographer moving across an alien landscape. What Naef and Wood describe as Bell's illustration of "man's awe of nature" - thus deliberately linking Bell with the American painters of the sublime - might be equally ascribed to various other, less art historical sources. Those "dramatic viewpoints and extreme spatial juxtapositions" were the very substance of successful commercial stereographic photography, and Bell was quite capable of making dramatic and spatially exciting stereo images in the streets of Philadelphia in images that had nothing to do with sublime subjects.

The 1976 exhibition and catalogue The Documentary Photograph As a Work of Art: American Photographs 1860-1876 included seven of Bell's Wheeler Survey photographs and one Army Medical Museum photograph. And although Bell is not discussed specifically in any of the catalogue's brief essays, his work is certainly included by implication in the conclusions that the various authors draw about

nineteenth century documentary photography between 1860 and 1876.

In this project, Joel Snyder and Doug Munson set out to bridge the gap between nineteenth century documentary photographs and the world of art - or at least that is what the title of their project declared that they were going to do. In their one-page, jointly-authored "Introduction," Snyder and Munson began by suggesting that the "historical problems of form and subject matter" are as applicable to the study of photographs (including documentary photographs) as they are to the study of "other kinds of pictures," and they make the statement that photographs "are expressive of the same kinds of values and cultural concerns as are, say - drawings or paintings."¹⁵ This line of reasoning leads them "to an assertion of our belief that the problem of what counts as a subject and what modes of presentation are suitable to that subject are crucial concerns for the photographer, as they are for all artists" (emphasis supplied), a sentence that seems to imply that the bridge between documentary photography and art has just been gapped. But what really transpired in the space of the three preceding sentences was that Snyder

15. Joel Snyder and Doug Munson, "Introduction," The Documentary Photograph as a Work of Art: American Photographs, 1860-1876. (Chicago: The David and Alfred Smart Gallery, University of Chicago, 1976), p. 8.

and Munson simply switched from using neutral words of "pictures" and "drawings and paintings" to terms like "artists," letting their text suggest that a legitimate transition had been made, when, in fact, they had done nothing more than make an unexplained substitution of terms.

Snyder and Munson were, of course, quite right to claim that photographs are pictures and that photography may profitably be studied as a species of picture. But this assertion in no way automatically admits photographs as a class into the realm of fine art, for even the act of studying a picture by art historical means cannot convey upon a picture the label of art.

A few paragraphs later, Snyder and Munson suggest that documentary photographs are works of art because they were made "self-consciously" within a tradition: "these men worked within the framework of prevailing modes of depiction and accepted notions of what kinds of things were important to portray."¹⁶ At the same time, they also note that:

We have not been concerned with representing the average photograph made by the average photographer. Rather, we have selected photographs that bridge the gap between that time, over a hundred years ago, and

16. Ibid.

today. We have attempted to select photographs that express both documentary and artful concerns that continue to interest us. 17

Yet it is their summary disregard for the average photograph by the average photographer that helps weaken the foundation of their thesis. For if it is true that "artful concerns" consist of form and subject matter (or "prevailing modes of depiction and accepted notions of what kinds of things were important to portray," as they put it), then no photographer can lay better claim to the status of artist than the average nineteenth century professional photographer, whose daily bread depended upon sticking to the "prevailing" and the "accepted." The unaccounted-for variable in their equation - namely the phrase about photographs "that continue to interest us" - unfortunately remained unexamined throughout their catalogue, in spite of the obviously crucial role that taste plays in the art historical designation of which objects qualify as fine art objects.

Snyder and Munson's thesis gets a skeptical reception - if not an actual rebuff - from their first invited essayist, Alan Fern, then Director of the Department of Research of the Library of Congress. Fern

17. Ibid.

concludes his essay "Documentation, Art, and the Nineteenth-Century Photograph" with this paragraph:

Let us be clear, however, that when we address them as works of documentation or of art we do so from our own time. These are distinctions developed after the fact, in this case, and they have far more to do with the ideas current about photography developed between 1880 and today than with the work in this exhibition. We may see these pictures, variously, as documents or as works of art, but evidently the makers thought of them as photographs, unmodified, as one of the most appropriate uses of a remarkable new technology, and as a new means of visual communication of unprecedented range and effectiveness. 18

The actual job of trying to bridge the gap between documentation and art was left to John Cawelti, a professor of English at the University of Chicago, whose six-page essay, "Photographing the Western Sublime," is the longest in the catalogue. Cawelti, like Naef (whose book he quotes), goes to some length to point out that:

It seems clear that the early photographic image of the West was shaped as much by artistic aspirations and cultural myths, as it was by problems of the medium, or the difficult circumstances in which many of the pictures had to be taken. Instead of documenting what they saw, the early Western photographers were looking for a certain kind of thing. In other words, there was an image of the West in their minds which played forth into the world they actually saw and this interplay

18. Alan Fern, "Documentation, Art, and the Nineteenth-Century Photograph," The Documentary Photograph as a Work of Art. p. 13.

shaped what it was that they made their cameras represent. 19

In support of his argument that most nineteenth century landscape photographs of the American West were self-fulfilling prophesies, so to speak, and in support of his conclusion that "the prevailing artistic tradition from which the Western photographers necessarily absorbed most of their conceptions of the beautiful was that of Romanticism,"²⁰ Cawelti made some simplistic generalizations about the work of Charles R. Savage, William Henry Jackson, Carleton Watkins, Eadweard Muybridge, and Timothy O'Sullivan, and quoted as confirming evidence such phrases as one that Savage made when summarizing the numerous problems that beset survey photographers in the West: "rarely were the circumstances favorable for producing fine views."²¹

To further weaken his own argument, Cawelti grouped together studio-owning, independent photographers like Watkins, Jackson, and Muybridge, who were making photographs for sale in their galleries, and commissioned professional photographers like O'Sullivan, who were

19. John Cawelti, "Photographing the Western Sublime," The Documentary Photograph as a Work of Art. p. 26.

20. Ibid.

21. Ibid.

working for governmental agencies, in spite of the fact that the two groups had significantly different sets of demands placed upon them by their respective audiences and clients.

Cawelti also based his opinions on the most popular and most known images each photographer, particularly O'Sullivan, when in fact all of the photographers that he mentions have bodies of work that could be used to belie any Romantic influences. For example, in response to a statement by Savage expressing relief at emerging from a desolated area of the West into an area of giant pines, fresh-water lakes, and snow-capped peaks, Cawelti ascribes to Savage "the influence of artistic ideology and cultural myth."²² Yet Savage (and nearly every other Western landscape photographer) actually did photograph the desolation, the deserts, the empty places, no matter how much he complained about the inhospitable setting. Photographers may have preferred certain subjects, but this did not stop them from photographing the less traditionally picturesque West.

Finally, Cawelti seems to believe that simply being influenced by an artistic tradition is tantamount to being an artist. But as photographic journals of the third

22. Ibid.

quarter of the 19th-century show, even the most mundane commercial portrait photographer and amateur landscape photographer was exposed monthly to the tenets of art, the lessons of the Old Masters, and the advice of contemporary painters. It can be argued, for example, that notions of the sublime were dispersed not only through art. Savage himself, in the passage that Cawelti quotes, supplies yet another cultural activity imbued with aesthetic notions: tourism. (Savage refers to himself as a "tourist photographer."²³) One could easily describe many nineteenth century Western photographers (like the Philadelphian, William Bell) as "tourist photographers," who, through numerous direct and indirect sources, had absorbed quite a lot of ideas about what was picturesque, what was visually rewarding, and what people back East wanted to see.

William Bell never claimed to be an artist, and (as far as is known) he never submitted his work to artistic exhibitions. He did, however, suggest in one of his articles that "want of artistic perception on the part of the professional" was very often the reason why a technically superior photograph would not be as satisfactory as another photography by someone whose "work

23. Ibid.

had more of the artistic element."²⁴ In suggesting to his fellow commercial photographers that they might do well to add "more of the artistic element" to their work, Bell was both suggesting how they might increase the quality of their photographs and making the point that increased quality meant increased competitiveness against inferior photographers.

For Bell, the artistic element was just one of the elements that went into the making of a good photograph and a successful, honest, commercial photographer; the artistic element was never an end in itself - that simply would not pay the bills. But in addition to being a photographer who spent a half century satisfying the demands of individual, business, and government clients, Bell was (as he reiterated often in his articles) a "professional" photographer, desirous of upholding and upgrading professional standards. Bell's many articles demonstrate that he was continually trying to improve his own photography, as well as the standards of others in his professional field. Whether or not there was actual improvement is impossible to say, given the dearth of photographs by Bell that fall outside his three years at

24. William Bell, "A Summer in Kentucky with Gelatin Plates," Philadelphia Photographer 22:266 (February 1885), p. 53.

the Army Medical Museum and his six months with the Wheeler Survey. But improvement and some artistic sense were expected among the more professional commercial photographers of his era, and Bell's career of over fifty years stands as a testament to his ability to compete, improve, and learn new chemistries and new technologies.

Thus, William Bell seems to exemplify in many ways the nineteenth century professional photographer, a category parallel to but ultimately different from the traditional category of artist. The tradition of the professional photographer was built up quickly with the development of the medium in the 1840s, and it essentially died around the turn of the century, when specialization and the deliberate demeaning of commercial work by the first generation of self-consciously artistic photographers ruptured nearly all of the ties between the two worlds. (Only fashion photography and, somewhat later, advertising photography, were able to sporadically bridge the gap between the commercial and the artistic sides of the medium.)

Although other photographers may have made more successful carte-de-visite portraits or more powerful landscapes of the Southwest or better stereographic images of the streets of Philadelphia, few were as successful at as many photographic endeavors as was William Bell. He

was an able professional who made considerable contributions to his profession and to our visual and historical heritage.

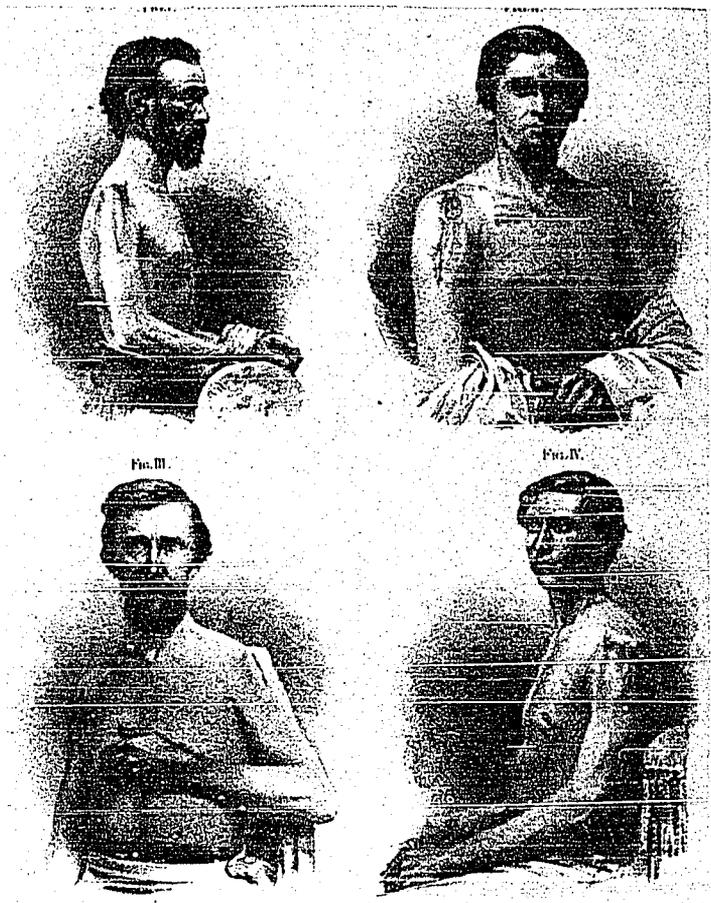


Figure 1. J. Bien (after a photograph by William Bell). "Results of Excisions of the Head of the Humerus," ca. 1867.

Lithograph, 8 1/2" x 6 1/2". From: The Medical and Surgical History of the War of the Rebellion, volume 2, part 2. (Washington, D.C.: Government Printing Office, 1876).

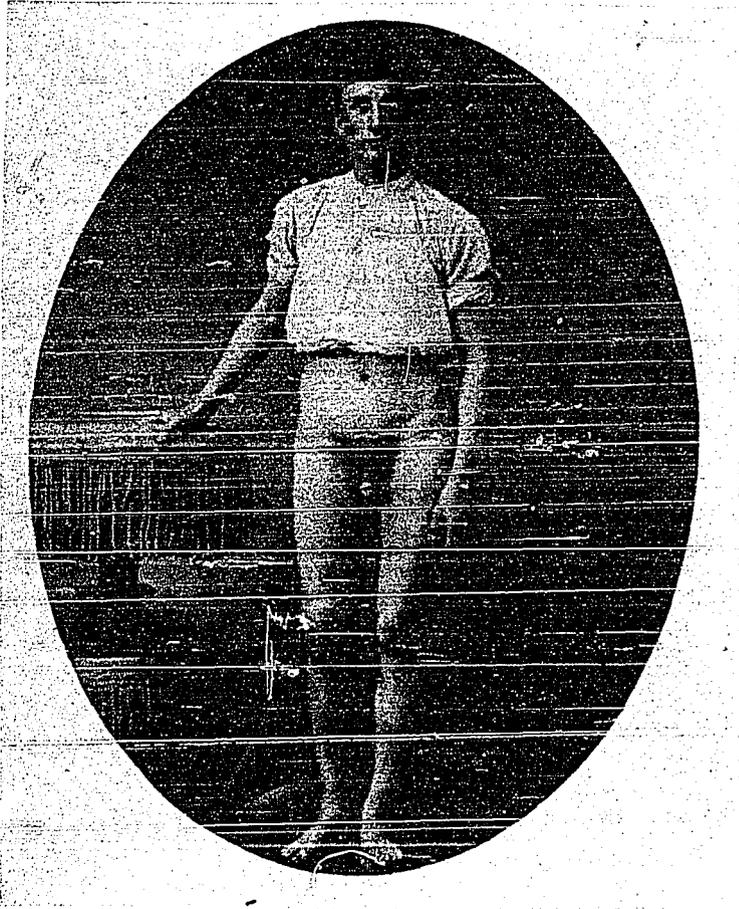


Figure 2. William Bell. "Consolidated Gunshot Fracture of the Lower Third of the Right Femur," 1865.

Albumen print, 8 1/2" x 6 1/2". Collection: Otis Historical Archives, Armed Forces Medical Museum, Armed Forces Institute of Pathology.

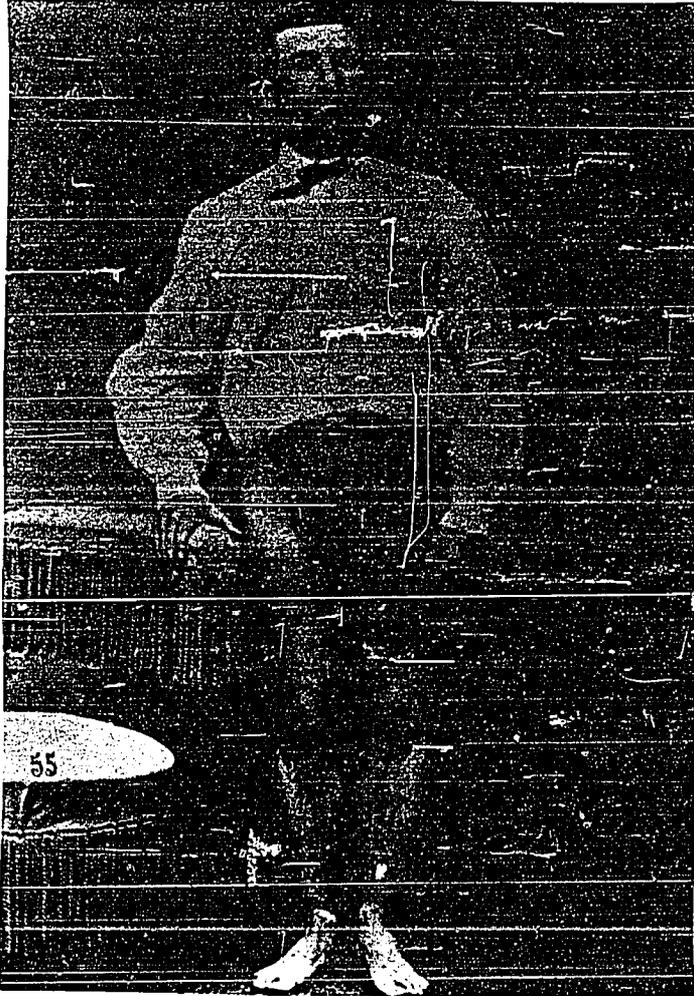


Figure 3. William Bell. "Consolidated Gunshot Fracture of Left Femur, Firm Union after the Removal of Large Fragments of the Shaft," 1865.

Albumen print, 9 1/4" x 6 1/2". Collection: Otis Historical Archives, Armed Forces Medical Museum, Armed Forces Institute of Pathology.



Figure 4. William Bell. "Facial Paralysis Consequent on Shot Injury," ca. 1867.

Woodburytype, 4 3/4" x 7 3/8". From: The Medical and Surgical History of the War of the Rebellion, volume 2, part 3. (Washington, D.C.: Government Printing Office, 1876).

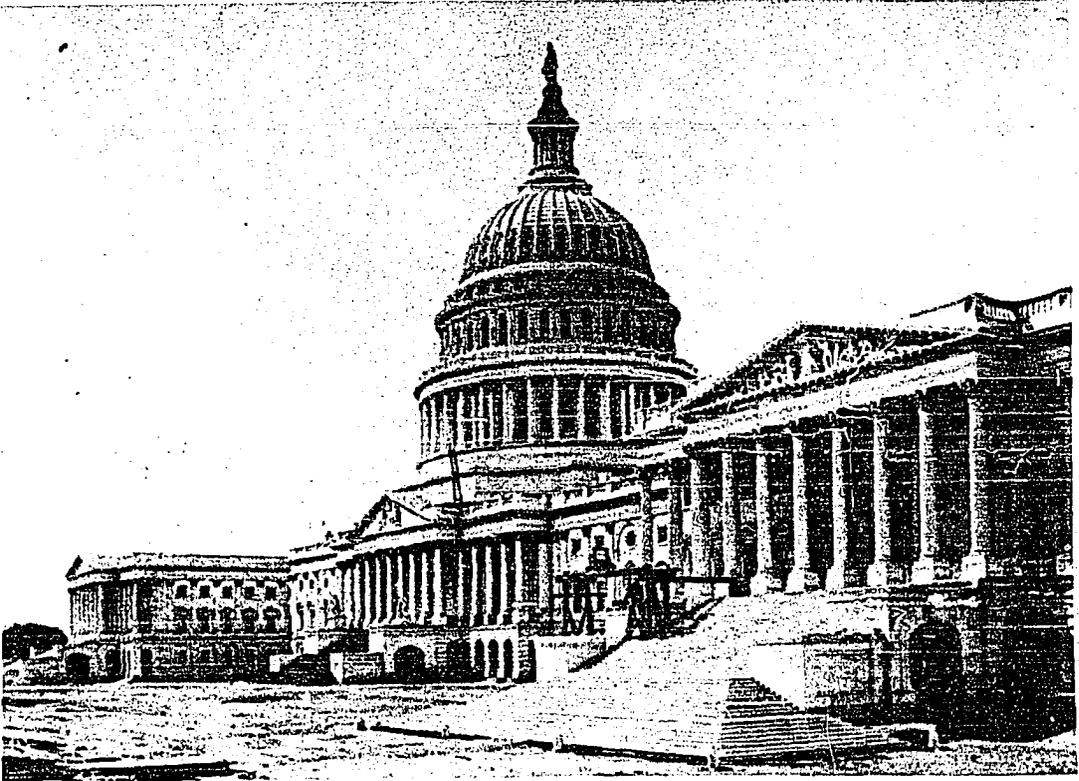


Figure 5. William Bell. (View of the U.S. Capitol), 1866.

Albumen print, . From: Philadelphia Photographer 4:43 (July 1867), frontispiece.

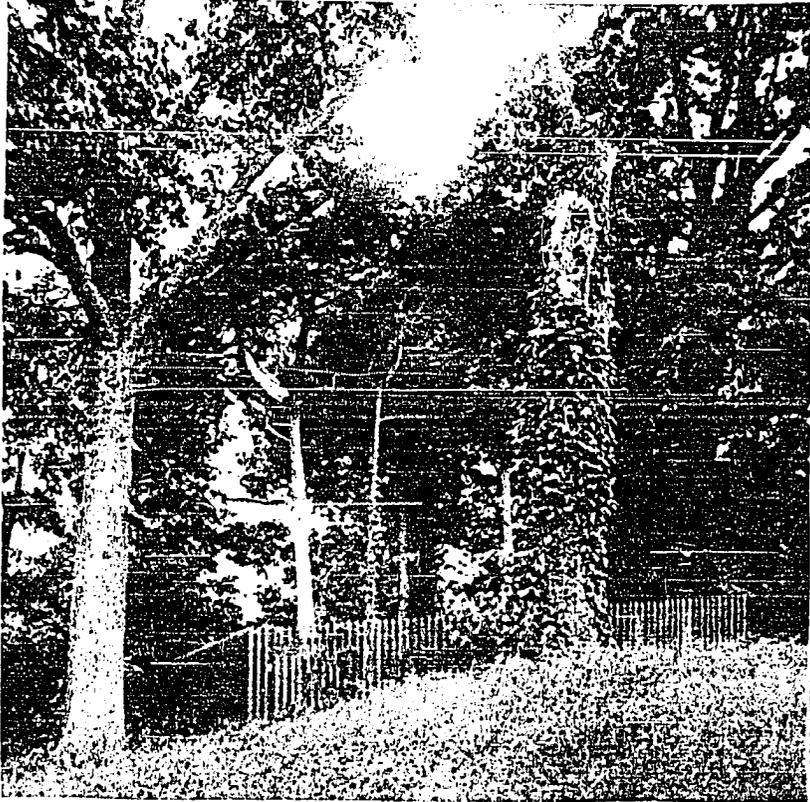


Figure 6. William Bell. "Old Tomb of Washington, Mount Vernon, Virginia," between 1866 - 1874.

Albumen stereograph, 3 1/8" x 3 1/8" (each).
Collection: The Library Company of Philadelphia.

Figure 7a. William Bell. (Portrait of a woman), ca. 1869.

Albumen carte-de-visite, 3 1/2" x 2 1/8". Collection: International Museum of Photography at George Eastman House.

Figure 7b. William Bell. (Portrait of a man), ca. 1869.

Albumen carte-de-visite, 3 1/2" x 2 1/8". Collection: International Museum of Photography at George Eastman House.

Figure 7c. William Bell. (Portrait of a woman and child), ca. 1869.

Albumen carte-de-visite, 3 1/2" x 2 1/8". Collection: International Museum of Photography at George Eastman House.

Figure 7d. William Bell. (Portrait of a woman), ca. 1869.

Albumen carte-de-visite, 3 1/2" x 2 1/8". Collection: International Museum of Photography at George Eastman House.





Figure 8. William Bell. "Dr. Jayne's Building, Carter's Alley, March 5th," (narrow version), 1872.

Albumen stereograph, 3 3/4" x 2 3/4" (each). Collection: International Museum of Photography at George Eastman House.

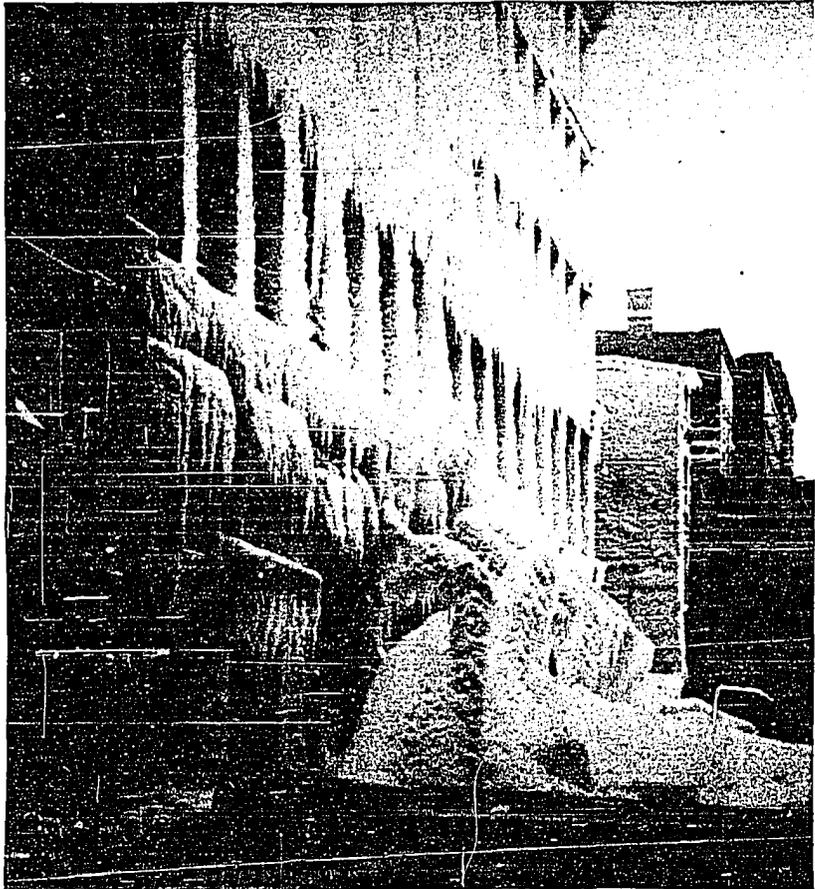


Figure 9. William Bell. "Dr. Jayne's Building, Carter's Alley, March 5th," 1872.

Albumen stereograph, 3 1/4" x 3 1/4" (each). Collection: International Museum of Photography at George Eastman House.

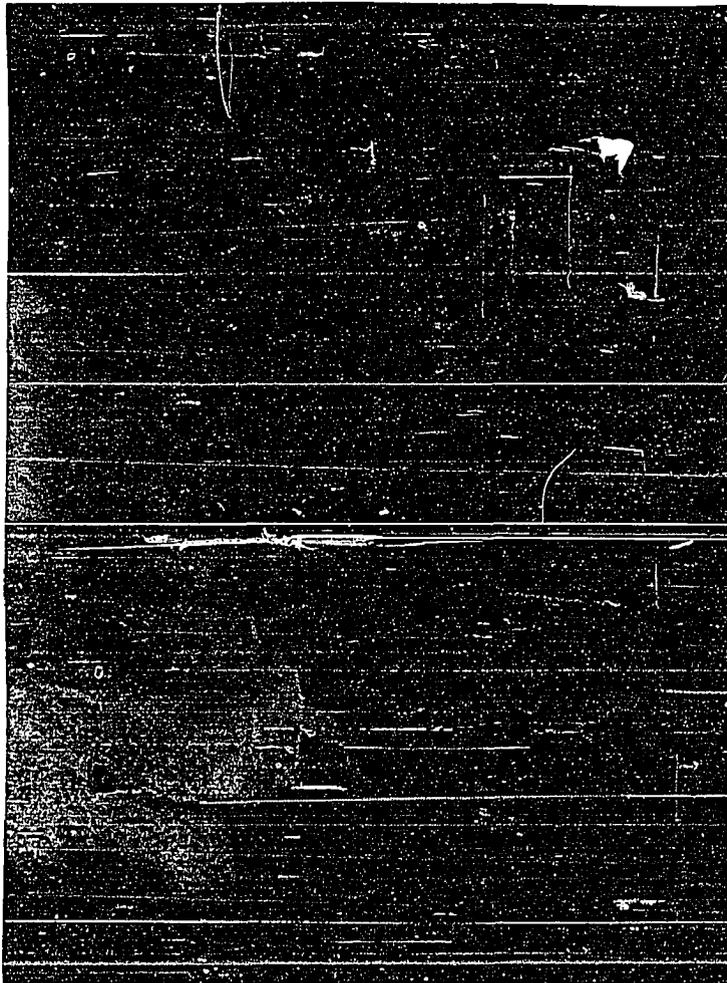


Figure 10. William Bell. "Looking South into the Grand Canyon, Colorado River, Sheavitz Crossing," 1872.

Albumen print, 8 x 10 3/4". Collection: Center for Creative Photography, University of Arizona.

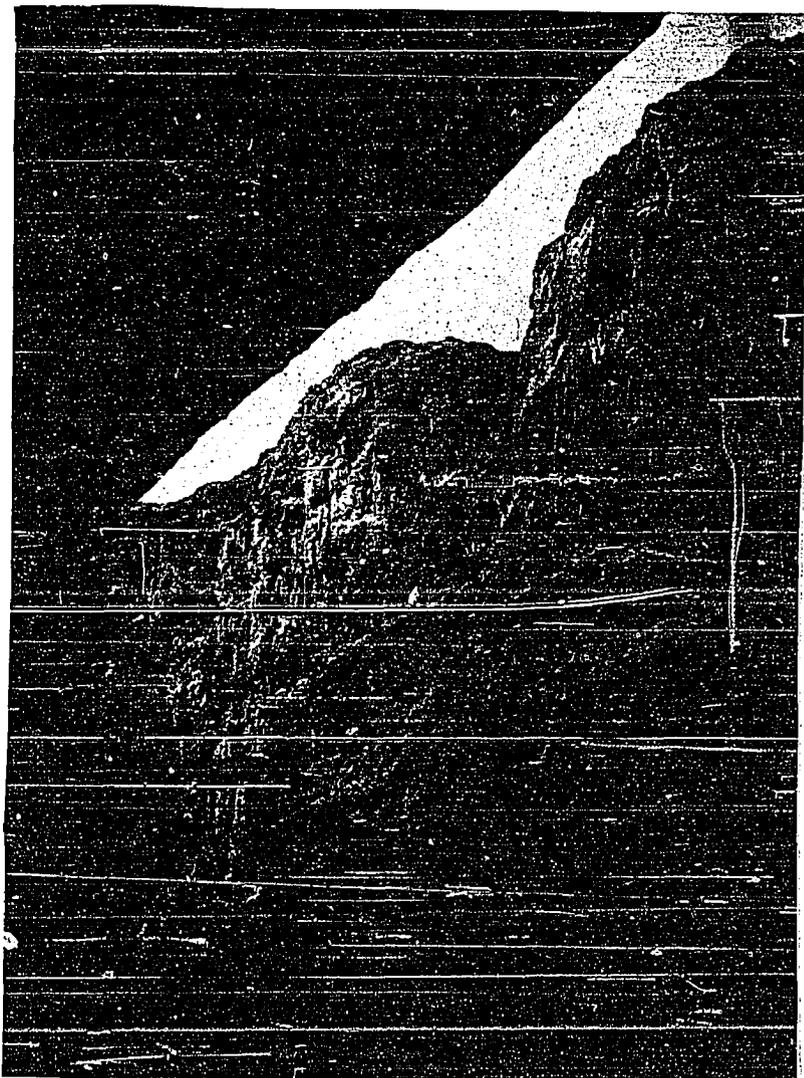


Figure 11. William Bell. "Canyon of Kanab Wash, Colorado River, Looking South," 1872.

Albumen print, 10 3/4" x 8". Collection: Center for Creative Photography, University of Arizona.

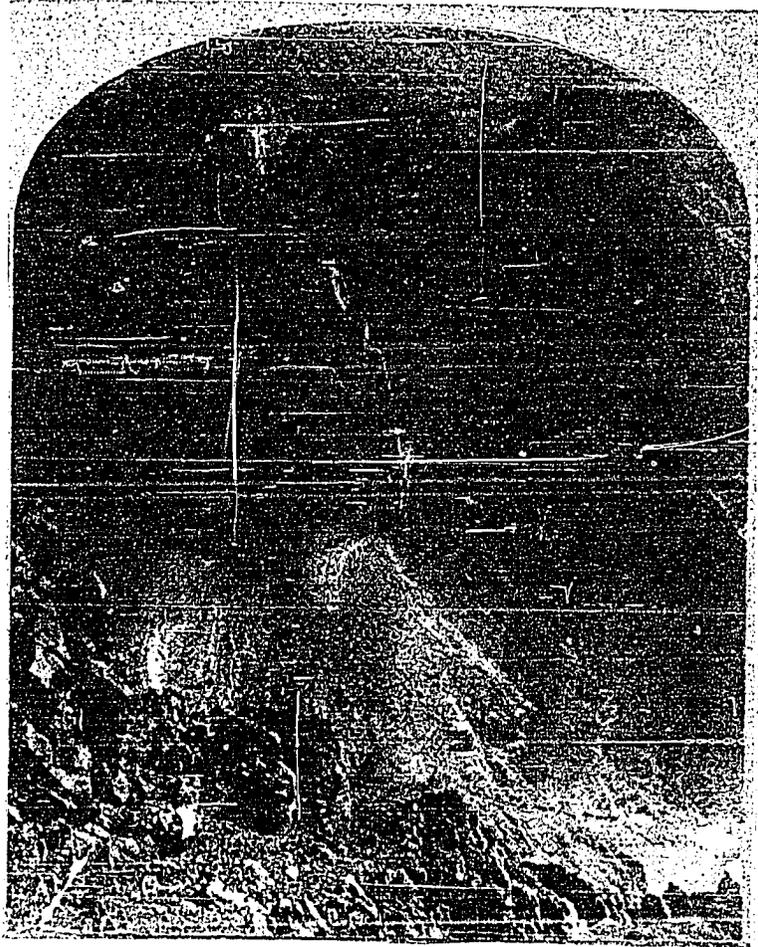


Figure 12. William Bell. "The Grand Canyon of the Colorado, Near the Foot of Toroweap Valley; A View of the South Wall of the Gorge, as Seen from the Opposite Bank," 1872.

Albumen stereograph, 3 3/4" x 3" (each). Private collection.

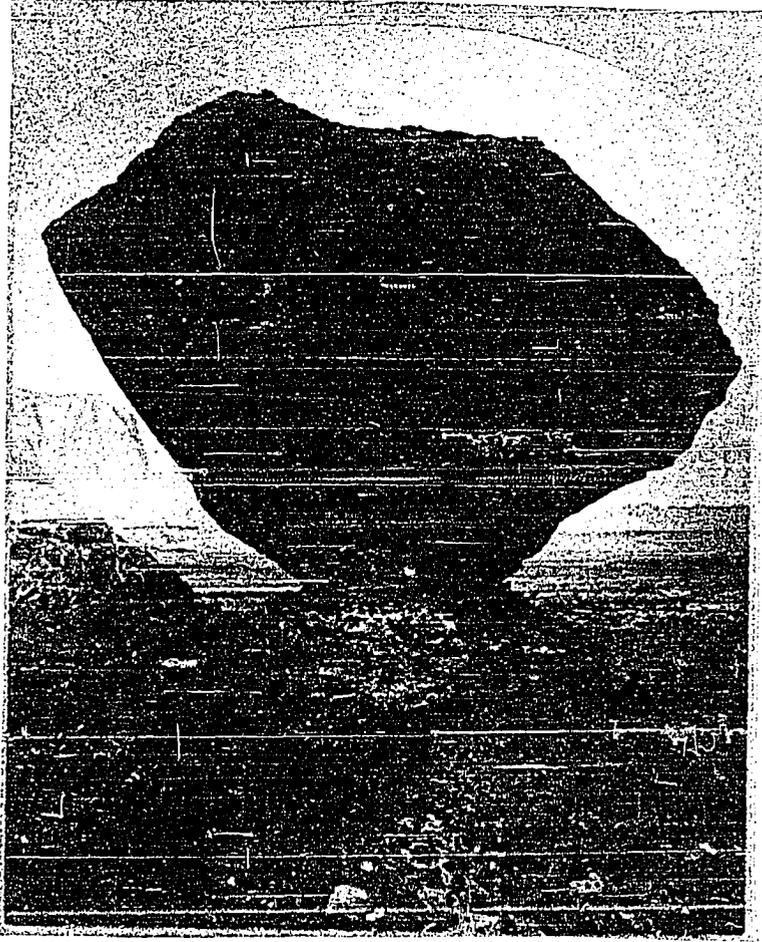


Figure 13. William Bell. "A Perched Rock of Sandstone, Which Is Being Gradually Undermined by the Action of Sand and Wind," 1872.

Albumen stereograph, 3 3/4" x 3". Private collection.

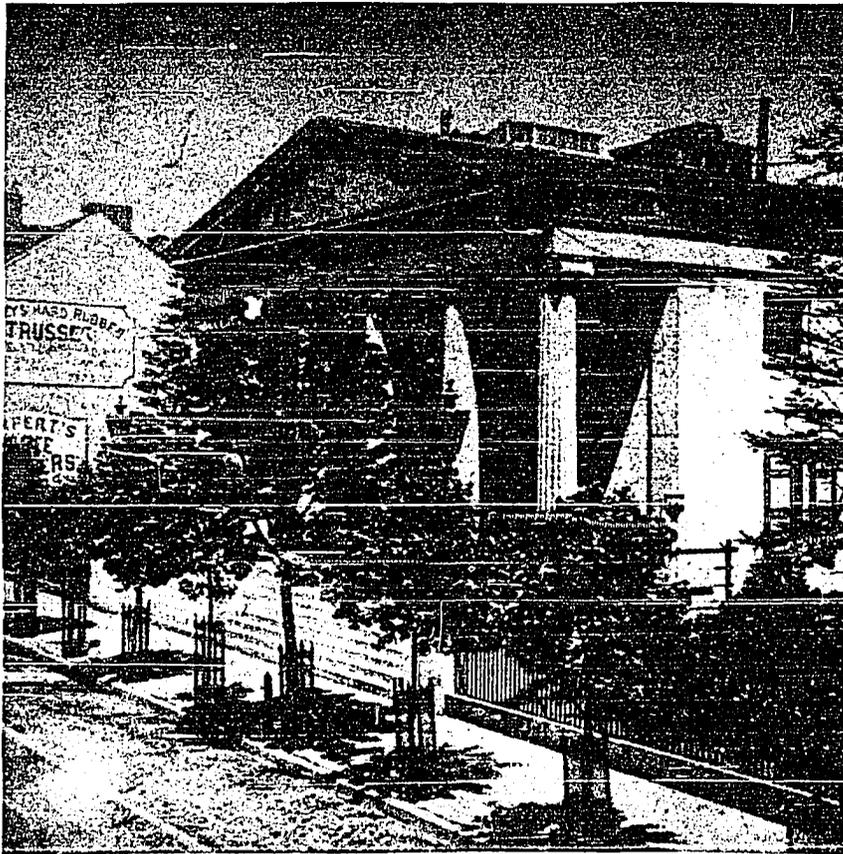


Figure 14. William Bell. (U.S. Mint, Philadelphia), 1874.

Albumen stereograph, 3 1/4" x 3 1/4" (each). Collection:
The Library Company of Philadelphia.

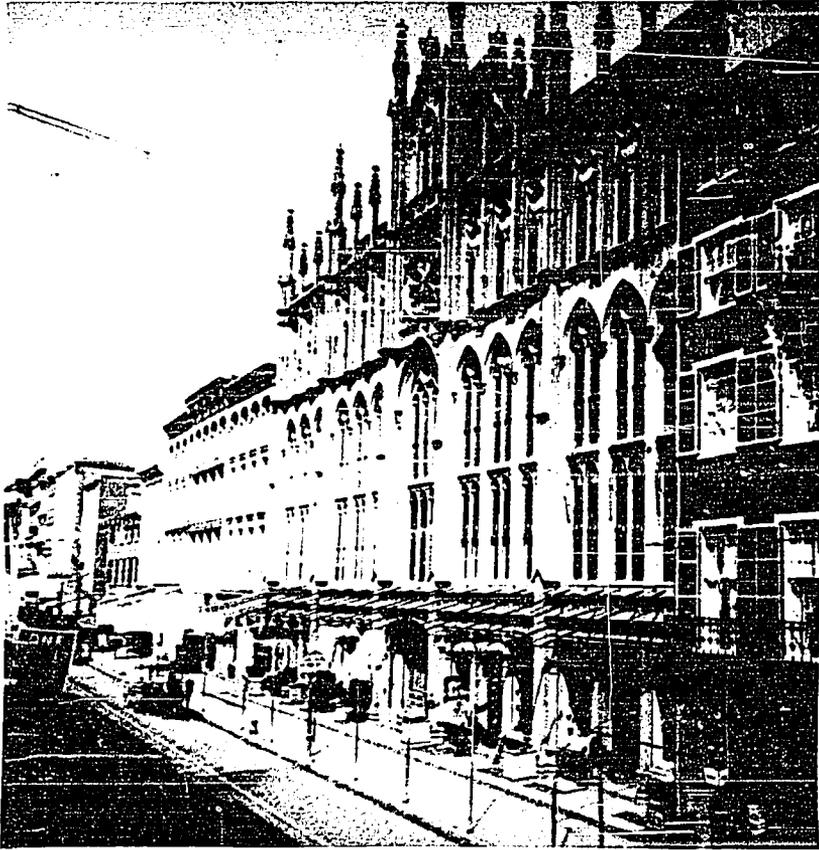


Figure 15. William Bell. "Masonic Temple on Chestnut Street, Between 7th and 8th Streets, Philadelphia," ca. 1872.

Albumen stereograph, 3 1/4" x 3 1/4" (each). Collection: The Library Company of Philadelphia.



Figure 16. William Bell. (Self-portrait), ca. 1874.

Albumen carte-de-visite, 3 1/2" x 2 1/8". Collection:
International Museum of Photography at George Eastman
House.



Figure 17. William Bell. (View of a mansion), n.d.

Albumen print, 6 1/2" x 8 1/2". Collection: The Library Company of Philadelphia.

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