THE ROCK ISLAND CLOCK TOWER,
From Ordnance to Engineers

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THE ROCK ISLAND CLOCK TOWER, From Ordnance to Engineers

by

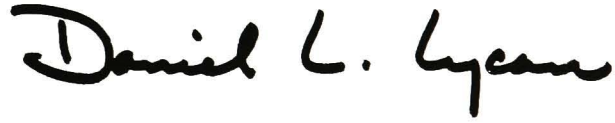
Roald Tweet

ROCK ISLAND DISTRICT
U.S. ARMY CORPS OF ENGINEERS
MAY 1977

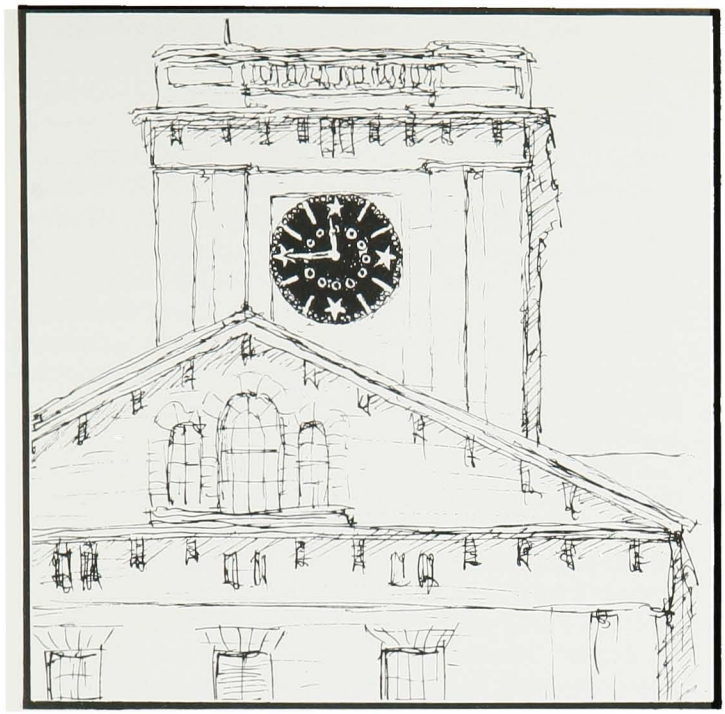
FOREWORD

The Rock Island District of the US Army Corps of Engineers is proud to have its headquarters in the historic Clock Tower Building. This building, completed in 1867, has served the US Army well for 110 years. It was the first building constructed for the Rock Island Arsenal; it served as an office during the construction in 1931-34 of Locks and Dam 15, adjoining the Clock Tower; and it became the Rock Island District headquarters in 1935.

The Clock Tower is on the National Register of Historic Places and we in the Corps of Engineers will continue to maintain this historic treasure for all of the people. Dr. Tweet has captured and preserved the story of this historical building in this booklet, and we are indebted to him for such an outstanding publication.



DANIEL L. LYCAN
Colonel, Corps of Engineers
District Engineer



THE ROCK ISLAND CLOCK TOWER BUILDING

The Rock Island Clock Tower Building, which stands at the western tip of Arsenal Island, three hundred feet from the site of old Fort Armstrong, has been a landmark in the Quad Cities for more than one hundred years. Generations of residents have grown familiar with the clock in the tower, whose four twelve-foot faces are visible from much of the area. Since 1868 when the precision clockworks were installed, visitors have climbed the six stories to watch the mechanism tick off almost perfect minutes. Many of them have scrawled their names and dates along the walls of the top two stories, a record reaching back into the 19th century.

"Storehouse A," as it was originally known, was built by the Ordnance Department of the United States Army between 1863 and 1868 as the first building of the newly-authorized Rock Island Arsenal. It was designed to equip Union soldiers who were both guarding the Mississippi against Confederate forces and protecting the newly settled western territories. Unlike typical Army storehouses of the 1860's, which were one or two-story wooden structures, the Clock Tower Building was built solid and large, a symbol of strength on the frontier.

Such a solid and strong front, however, hides a troubled history. Events have seldom gone smoothly for the Clock Tower Building. In the first place, political and business pressure groups who wanted the Island used for commercial development opposed its use as an arsenal. Squatters on the Island proved difficult to remove. Then, construction began during wartime when good help was hard to get, and materials and transportation even more so. Wartime inflation rates of as much as 30% a year increased the difficulties and helped drag the project on for more than four years, three years beyond the 1865 date on the keystone.

Its use, too, brought problems. The Union forces it was built to serve were disbanded before the first floor was finished. Before the shell was half up, Major T. J. Rodman (afterwards brevet brigadier-general), the second commandant of the Arsenal, had designed a newer and much larger armory and arsenal toward the middle of the Island. Although he did finish the construction of Storehouse A in 1868, the building was already obsolete, and remained outside the gate of General Rodman's new arsenal.

From 1871 on, the building was used to store arms, but its importance diminished as the main arsenal grew. Sometime before World War I the Army ordered it torn down. It was saved only in response to local sentiment and kept, as a later commandant, Colonel D. M. King, wrote, "chiefly as a relic."[1] By 1930 the Arsenal had moved its storage facilities elsewhere, leaving the Clock Tower empty.

Had the Rock Island District Corps of Engineers not outgrown its headquarters in the

top two floors of the Rock Island Federal Building above the Post Office, the Clock Tower might have remained merely a landmark, never used to capacity. Fortunately for the Engineer Corps, the building was available in 1931 when construction began on Locks and Dam 15, the first work on the monumental nine-foot channel project. The Clock Tower was located just a few hundred feet from the construction site. Beginning with a field construction office in 1931, the Corps gradually moved operations from the Federal Building to the Island. By 1935 the Rock Island District had new, permanent quarters, while the Clock Tower, for the first time, was operating at full capacity. By accident and misfortune then, the history of the Clock Tower Building and the history of the Rock Island District Corps of Engineers came together.

THE BEGINNINGS OF STOREHOUSE A

Congress recognized the military importance of the Island of Rock Island as early as the War of 1812. This war demonstrated the need of protecting the upper and middle Mississippi regions from hostile Indians. Army boards selected three sites for construction of permanent fortifications: Fort Snelling in Minnesota; Fort Crawford near present-day Prairie du Chien, Wisconsin; and Fort Armstrong at the foot of Rock Island. On May 10, 1816, the 8th U.S. Infantry from St. Louis landed on the Island to begin construction of the fort.

Fort Armstrong provided guidance and protection for settlers who first began arriving in the area in 1828, especially during the Blackhawk War in the early 1830's. With the movement of the Indians west of the Mississippi and with the rapid settling of towns along both sides of the River, the need for Fort Armstrong diminished. In November, 1836, the few remaining soldiers left, and the Fort was never regarrisoned. In 1840 an arms depot was established at the site and arms were shipped to western points until 1845. By the Civil War, all but one of the buildings at Fort Armstrong had been destroyed by fire, squatters, and by time.

Between 1840 and 1862 the future of the Island remained in doubt. In 1825 the Secretary of War had ordered the Commissioner of the General Land Office to reserve the entire island from sale so that it could be used for military purposes. From this point on, nearly all of the dozen or so examinations which Congress ordered to find a site for a "western armory" to serve the growing population of the region not only included Rock Island, but recommended it as an ideal site for a national armory.

Two of these reports were especially enthusiastic about Rock Island. In September of 1840 Colonel Talcott, the Chief of Ordnance, directed the commanding officer of St. Louis Arsenal to examine Rock Island as a possible site for ordnance purposes. That examination and report by Captain William Bell found the Island ideal for military activity. Its more than 900 acres was nearly all government-owned; transportation and waterpower were nearby; and, though isolated from attack, it was surrounded by thriving cities and raw material.[2]

Congress ordered a more extensive examination of the "whole Western country" in September of 1841 "for the purpose of selecting a suitable site on the Western waters for the establishment of a national armory."[3] The resulting board of three officers spent eighteen months on the examination after which they prepared a four hundred page report. They paid special attention to the incredible beauty of the wooded, gently rolling island rising abruptly ten to thirty feet out of the Mississippi, but they also confirmed what previous reports had noted: Rock Island was militarily ideal. It was close to important raw materials: coal, stone, iron, lead. More than 80,000,000 board feet of lumber came downriver past Rock Island annually. From the head to the foot of the island the river dropped seven feet, which would allow a dam across the Illinois channel to produce an estimated 20,000 horsepower for manufacturing. Yet it would leave the Iowa channel free for navigation.[4] By the Mississippi River alone, more than 12,000 miles of inland waterways lay open to the island, with direct shipping to fifteen states and three territories. In addition, Rock Island had a solid limestone base on which to erect the kind of buildings an armory and arsenal would require. And, unlike most Mississippi River islands, this one did not flood.

Finally, the island was centrally located to serve a wide area. By water, Rock Island lay 332 miles north of St. Louis and 397 miles south of St. Paul. By rail, Chicago was 180 miles away, while 316 miles to the west lay Council Bluffs on the Missouri River. By 1861 the population within a 350-mile circle of Rock Island had reached 6,000,000. Few examiners and boards doubted, then, that Rock Island was ideally suited for an arsenal. Supporting proposals and memorials to Congress came during the 1850's from the Iowa and Illinois legislatures and from the cities of Rock Island, Moline, and Davenport, who were eager to see an arsenal located on Rock Island.

Not all local residents were so inclined. As early

as 1838 squatters had begun to encroach on the island. Sporadic attempts to remove them were seldom successful. In addition to squatters, private parties with legitimate claims had moved onto the land. Congress had deeded three blocks of government land to private groups: to Colonel George Davenport for a house and farm; to David Sears for a mill and water power dam; and to the Chicago, Rock Island, and Pacific Railroad for a right-of-way connecting Illinois with the first railroad bridge across the Mississippi on the north side of the island.

During the 1840's and 1850's, mill owners and other private interests increased their pressure to have Rock Island turned over to the public for sale. That nearly happened on January 7, 1850, when the President issued an order directing the Secretary of State to sell Rock Island. This came closer to reality on February 6, 1854, when a bill was introduced into Congress authorizing the sale of the island in ten acre tracts. At this point, Jefferson Davis, then Secretary of War, entered the controversy. He had become a supporter of Rock Island as an arsenal site while on a visit twenty-two years earlier, and he had remained convinced of its importance. He appealed the decision to sell the island and won; in July 1854 notice was served on all persons who had located on the island to vacate.[5]

This "notice" did not work. Pro-arsenal residents in the surrounding area continued to complain of encroachment. One letter sent to Secretary of War John Floyd from several Moline residents (including Dimock, Gould, and John Deere) in 1857 complained that the island was being despoiled of timber "by those entitled 'paupers' (in contradistinction to squatters)," and warned that no threats against them would work since they were "as penniless as worthless."[6]

By 1858 the War Department was again ready to give in. Advertisements were placed in major newspapers requesting sealed proposals for "all or any part not less than one legal subdivision of the unsold land of the Island of Rock Island heretofore reserved for military purposes."[7] Bids for these ten to seventy acre tracts arrived from all over the country.

Before the War Department acted on these bids, the deep shadow of civil war closed all speculation. With the coming of the War in 1861, the need for increased storage and manufacturing facilities became evident, especially at a location as vital as Rock Island on the Mississippi waterway. On July 11, 1862, Congress passed an act to establish an arsenal at Rock Island and appropriated $100,000 for its first building, the building that was to become the Clock Tower.

BUILDING THE CLOCK TOWER

Even war and the clear need for a western arsenal did not end politicking, however. From the beginning, the dream of a great national arsenal on Rock Island was in conflict with the political realities of Congress. The bill originally introduced into Congress to establish an arsenal (for storage of arms) and an armory (for their manufacture) at Rock Island reached its third reading. But other locations in the West desired the arsenal, too, and they eventually forced a compromise substitution, the Act of July 11, 1862, "An Act for the Establishment of Certain National Arsenals," which ordered "that there shall be, and hereby is, established a national arsenal at Columbus, in the state of Ohio, at Indianapolis, in the state of Indiana, and on Rock Island, in the state of Illinois, for the deposit and repair of arms and other munitions of war."[8] $100,000 was appropriated for each of the new arsenals. The bill passed with only sixteen votes against in the House and eight against in the Senate. In each case, although plans called for future buildings, Congress authorized construction of only the first building, a storehouse. Such a compromise disturbed the dreams of those in the Ordnance Department who had imagined a "Harper's Ferry of the West" on Rock Island.

In the fall of 1862 Chief of Ordnance, General C. P. Buckingham, spent some time studying the island and other sites. He wrote to the Secretary of War that Rock Island was "without doubt the best place for an Arsenal."[9] He further determined that the best place on the island for such an arsenal was the western end near the site of Fort Armstrong. Boat landings were easier at this point, waterpower was available close by, and access to both Davenport, Iowa, and Rock Island, Illinois, made goods and labor available.

The immediate war effort was directed elsewhere during the winter of 1862-63, however, and little was done. By February 1863 local newspapers were using editorials to complain about the delay and to urge residents to write their senators and congressmen. In March, Illinois representatives in Washington obtained assurances from General Ripley, Chief of Ordnance, that he would begin at once.[10] A month later, in a personal letter to the Rock Island *Argus*, General Ripley wrote that plans for the first building were just about complete.[11]

Two months later General Ripley assured the *Argus* editor, J. B. Danforth, that a competent officer would be in charge of the work, quieting Rock Island fears that "some Davenport

politicians were trying to get a politician as superintendent of the work."[12]

Accordingly, on May 6, 1863, General Ripley appointed a board of three officers and ordered them to Rock Island to select a site and recommend construction materials for the first building. The officers appointed were Captain T. J. Treadwell, Major F. D. Callender, and Major C. P. Kingsbury. Actually, many of those decisions had already been made by General Ripley during his visit the preceding fall. His letters to the three officers instructed them to report to Davenport by May 16 to examine land "at the lower end of Rock Island, which has been selected and approved by the War Department."[13] General Ripley also had determined that the best stone for the building was LeClaire limestone, a buff-colored dolomite from a quarry fourteen miles upriver from the Island. This same quarry had provided the stone for the piers of the first bridge across the Mississippi River in 1854.

Specifically, the officers were to recommend proper positions for the principal storehouse and magazine, keeping in mind "the future erection of other buildings."[14] Their examination was brief and their decisions quick. By May 18 they had completed their report and sent it to the Ordnance Department. The report noted in part that:

> they have carefully examined the ground at the lower end of the Rock Island, selected by the War Dept. for a United States Arsenal, and recommend that the front of the principal storehouse be on the prolongation of a line drawn from the southwest corner of a wooden building, now occupied by a tenant, and that the southwest corner of said storehouse be placed at a point on this line 300 feet distant from said wooden building, the said line bearing about south 40 degrees west.
>
> They have also selected two sites for a magazine, one on the high ground about 780 feet due east from the short railroad bridge passing over the southern road, running toward the upper end of the island and in the vicinity of three graves, each surrounded by a white picket fence.[15]

The wooden building referred to in the report is apparently the same building which shows up in an early etching of the Clock Tower, where the building is identified as "General Winfield Scott's Headquarters after the close of the Blackhawk War." (See Fig. 1.) The etching shows the wooden building and the Clock Tower in the relationship described in the report. The long, low building in between the Clock Tower and Scott's headquarters in the etching is apparently the shed built by Major Kingsbury late in 1863 to house workshops for carpenters and stoneworkers. Both of these buildings are shown as existing on a map drawn by W. D. Clarke, a civil engineer, in 1865, and published in Major Flagler's history of the Rock Island Arsenal (1877). (See Fig. 2.) That map correctly shows the Clock Tower under construction in 1865, while the two buildings to the east are shown as completed, and in the location shown in the etching.

For two months following the report no further action was taken, as the energies demanded by the Civil War were needed elsewhere. June was a crucial month for the Union forces, culminating in the Battle of Gettysburg on July 1-3, and the fall of Vicksburg on the Mississippi to Grant on July 4. By the middle of July the *Argus* was again wondering why the work was delayed. Editor Danforth was sure that "certain Republican influences in Chicago are at work."[16]

On July 27, 1863, General Ripley finally made the appointment authorized by the Act of July 11, 1862. He ordered Major Charles P. Kingsbury, one of the board of officers who had examined the site the previous May, to command the Rock Island Arsenal and to superintend construction of the principal storehouse. Major Kingsbury was ordered to report to Rock Island as soon as possible to begin the work.[17]

With ironic timing, a day after Major Kingsbury received his orders, Davenport and Rock Island residents received news that would overshadow construction of the new arsenal: a major camp designed to hold 13,000 Confederate prisoners was to be built on the Island. When Major Kingsbury arrived in August, he found this prison already well under construction uncomfortably close to his own site.

Accompanying Major Kingsbury's orders were six sheets of plans for the principal storehouse. The plans had been designed and drawn up in Washington by the Ordnance Department. They showed a building similar in general design to buildings at other arsenals and armories. The main outlines of the Rock Island Clock Tower can be seen, for example, in the main building at Frankfort Arsenal constructed a decade earlier. (See Fig. 3.) Springfield Arsenal has a similar building.

Contrary to later assumptions, the Clock Tower was never intended to be more than a storehouse for arms and munitions. The intention of the Ordnance Department was to build a headquarters building later on higher ground several hundred feet south of the storehouse. The interior of the building was to be severely functional. All three main floors were free of partitions, obstructed only by two rows of iron columns on the first two floors. There were no provisions for heat, light, or ventilation. Two staircases, one at each end of the portico on the south side, provided limited access to the floors.

Even the tower itself was more functional than decorative. Its primary purpose was to provide a frame for a pulley-operated hoist used to lift

Fig. 1. Early etching of the Clock Tower Building (artist unknown).

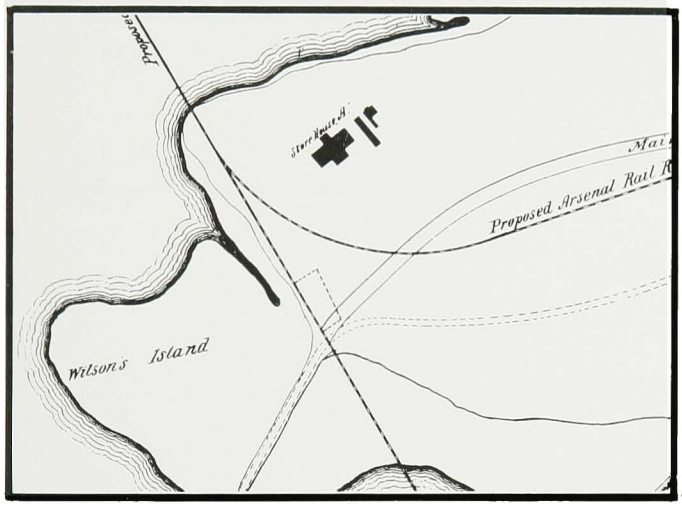


Fig. 2. An 1865 map of Rock Island, showing the uncompleted Storehouse A and two buildings to the east.

Fig. 3. Bottom. Main Building, Frankfort Arsenal. —National Archives Photo

heavy loads of supplies to the upper floors and to the attic. The open arches at the ground level of the tower, opposite each other, provided access to the hoist for horse drawn wagons. A stairway along the north side of the tower provided access to the hoist and to the clock on the fifth and sixth floors.

The outside of the building, however, shows more attention to architectural design than was usual for military construction of the day. This attention can be seen in the original plans, but even more so in the many liberties Major Kingsbury, and especially General Rodman, took with those plans.

The design of the Clock Tower invites comparison with its counterparts at the Columbus and Indianapolis arsenals, an interesting sidelight to the Clock Tower history. These arsenals had also been authorized by the Act of July 11, 1862. On July 28, 1863, a day after the appointment of Major Kingsbury to Rock Island, General Ripley ordered Captain T. J. Treadwell (who had also been a member of the board of officers in Rock Island in May) to Indianapolis to begin construction of the principal storehouse

there. On August 11, General Ripley ordered Captain J. W. Todd to the same task at Columbus, Ohio. In each of these orders, as in Major Kingsbury's, there were identical sets of plans for "Storehouse A." Only the materials varied. The Indianapolis Arsenal was to be of brick, for example, which was more accessible in that area. Consequently, while the actual plans for the Rock Island building have been lost or destroyed, the plans for the Columbus Arsenal in the National Archives (Figs. 4-8) serve well in their place.

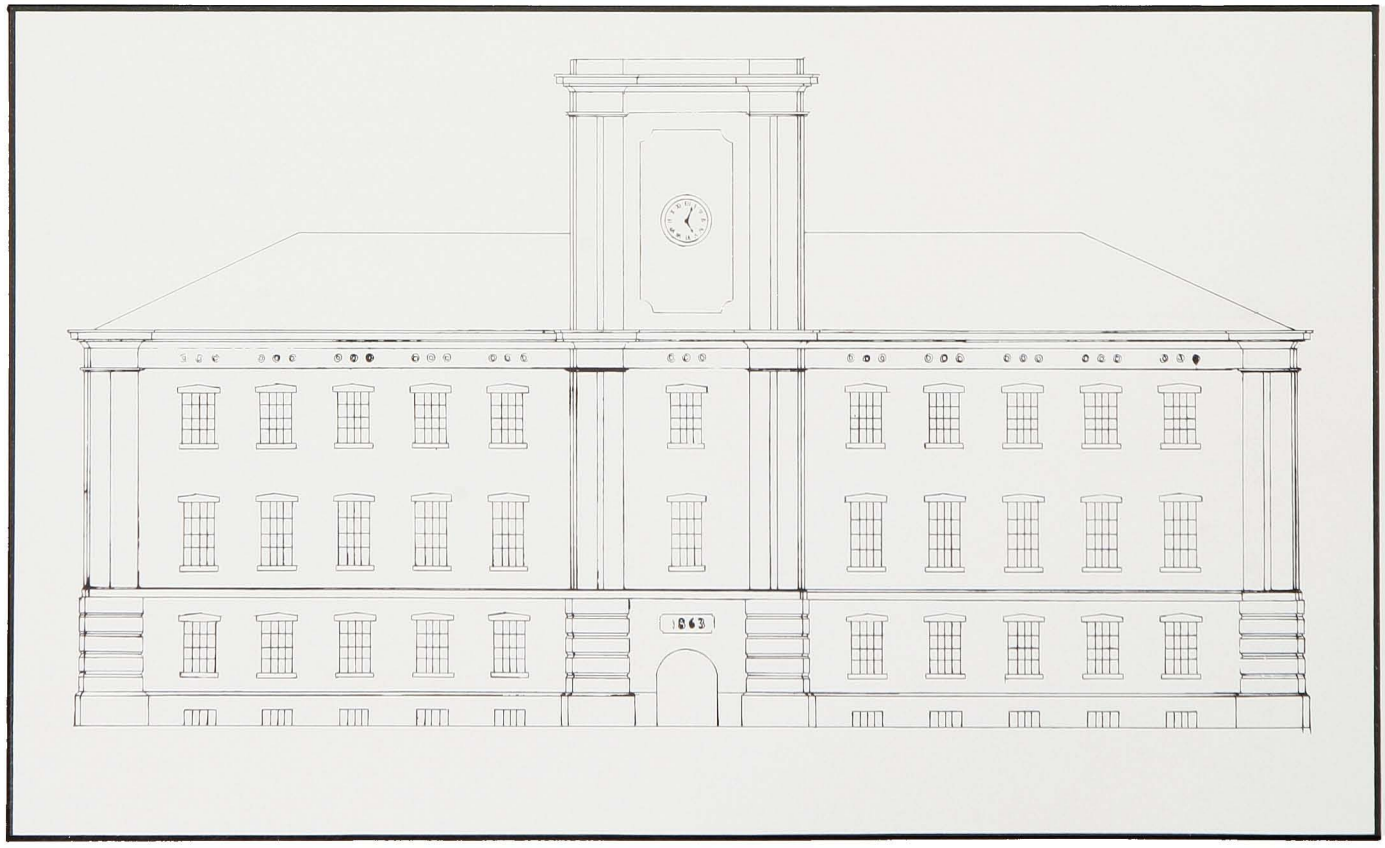
The Clock Tower at Rock Island (Fig. 9) shows several important departures from the Columbus plans: changes in roof line, cornices, height of tower, and size of clock. These changes arose from Major Kingsbury's and General Rodman's dissatisfaction with the plans. At least partly because they both felt that Rock Island should have a more impressive building, they obtained permission from the Ordnance Department, bit by bit, to make these changes. The Indianapolis Arsenal (Fig. 10) is a good example of the building called for on the original plans.

A comparison of the Columbus plans with the Rock Island Clock Tower shows an interesting architectural shift. The original architect is not known, but the design, according to a historian of the Indianapolis Arsenal, represents "an example of the use of monstrously large architectural scale recalling the 'Revolutionary' architecture of Boulee."[18] The design was intended as an expression of military strength.

What the original plans show is a combination of two popular architectural styles in public buildings in mid-19th century America: Italian Renaissance and classical Greek revival. The primary emphasis is Greek revival, a favorite of banks and Federal buildings to indicate power and strength. The south view of the main building (Fig. 5) with its 60-foot portico shows especially the flavor of a Greek temple. The hip roof, the rectangular tall main building, the dressed stone, the frieze below the cornice with triple roundels are all in the Greek style.

Mixed in with this classical Greek style are elements of Italian Renaissance architecture: the double pilasters (columns embedded in the wall) at each corner of the building, the rusticated stonework at the first floor level, the arches, and the tower itself. This mixture led Major Flagler to conclude that "no name can be given to the exterior architecture."[19] A local art historian at Augustana College has suggested that the original plans are an example of "invisionary" architecture of the 19th century which combined various styles in giant proportions.[20]

Fig. 4. Plans for Storehouse A, Columbus Arsenal, tower side of building. (This plan set is from the National Archives Collections.)



Nearly all of the changes made by Major Kingsbury and General Rodman moved the building away from its Greek flavor to a purer Italian Renaissance style. They added rustication to window frames and to the architraves (the stone above windows and doors). The roundels in the frieze were replaced by rectangular windows. Cornices were enlarged and supported by brackets. The hip roof was changed to a gable roof, and triple arched windows in a palatinate style were added at each end, and to the pediment above the portico. Balusters and brackets were added to the tower top.

The Clock Tower as it finally emerged is still not quite consistent. The main building is Italian Renaissance, an attempt to imitate the plain, rural, background buildings in Renaissance paintings — well suited to the desire of the Army to avoid ostentation and expense while creating an imposing aspect. The tower is from the Italian villa style which was coming into popularity at the time, but usually for smaller buildings.

It is interesting to note that, having turned the Clock Tower into an Italian Renaissance building, General Rodman went on to create an even purer example of such architecture four years later when he built the Commandant's house on the Island. This good example of the villa style is still standing and still used. (See Fig. 11.)

The Clock Tower shows no influence of two other architectural styles which were rapidly becoming popular in 1863: the Victorian and gothic.

Major Kingsbury arrived to make his headquarters in Davenport, Iowa, on August 13, 1863.[21] His settling in Davenport confirmed the fears of Rock Island citizens that government officials in Washington were not aware of a *city* of Rock Island apart from the Island of Rock Island. An *Argus* editorial of August 10 hoped that Major Kingsbury would not "look for the Island in Iowa. It is in Illinois — also plenty of good hotels, too."[22]

The Major arrived full of enthusiasm. At a press conference on August 15, he described the handsome building to be erected. It would be located, he said, "as near the point of the Island as a square of 600 feet on each side can be obtained which will face due north."[23] The main building was to be 180 feet by 60 feet, 58 feet high. On the south side a portico would extend 60 by 14 feet, while on the north side a 34-square-foot tower would rise 97 feet. The main building would contain five stories, including attic and basement, with six stories in the tower. A clock in the tower would be visible on the Island and from surrounding cities. The limestone would be cut into regular dimensions and faced.

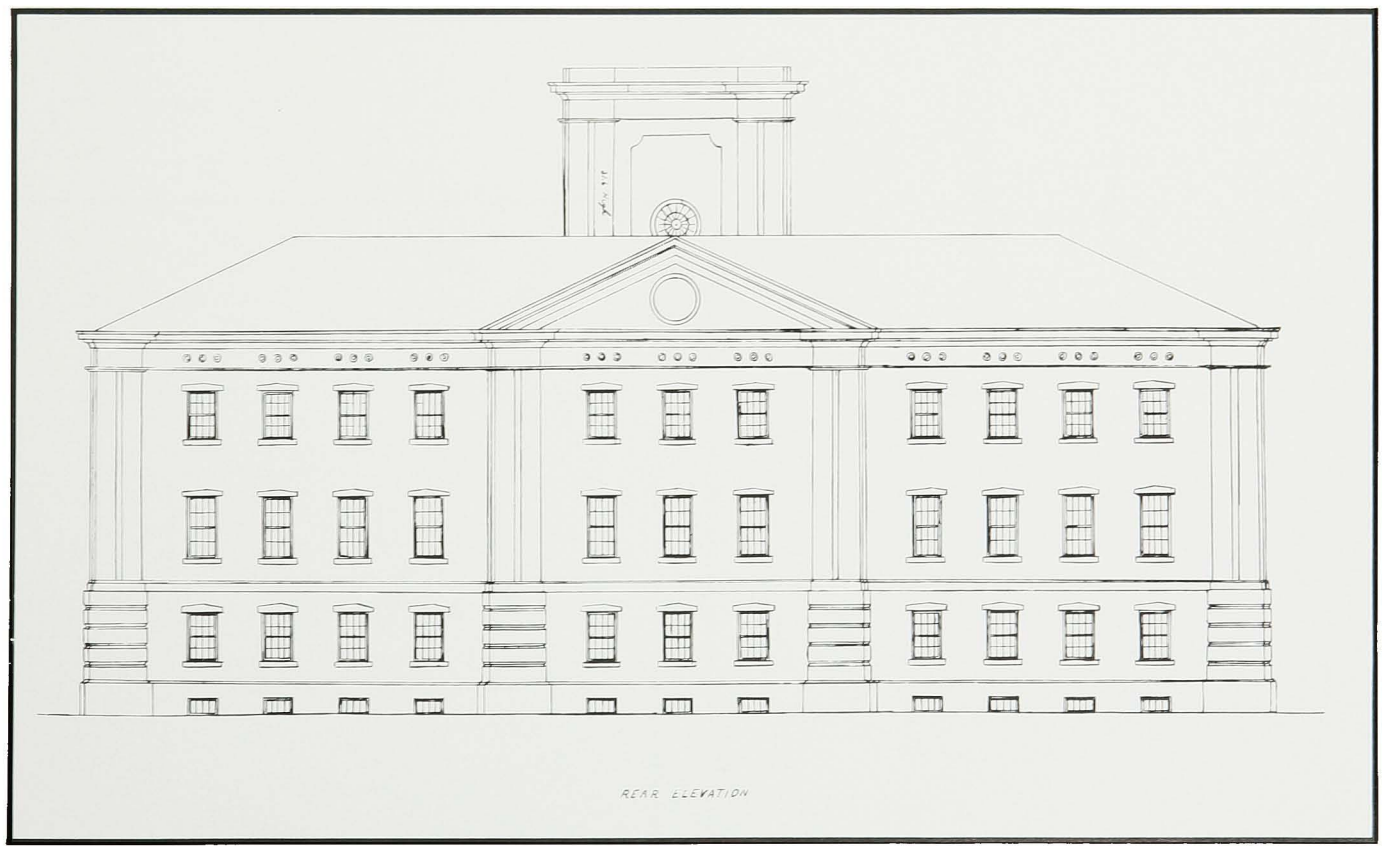
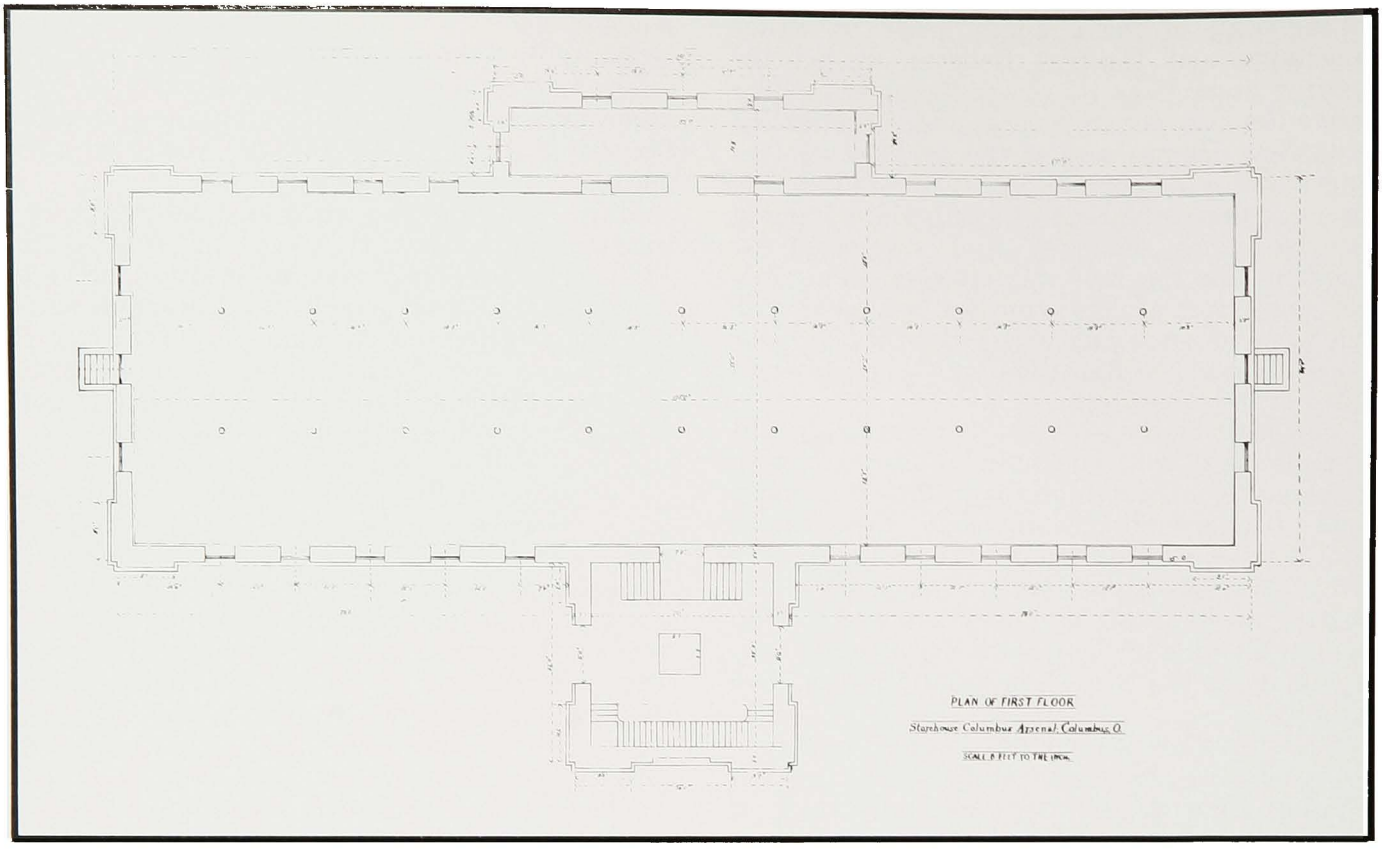


Fig. 5. Portico side of Storehouse A, Columbus Arsenal.



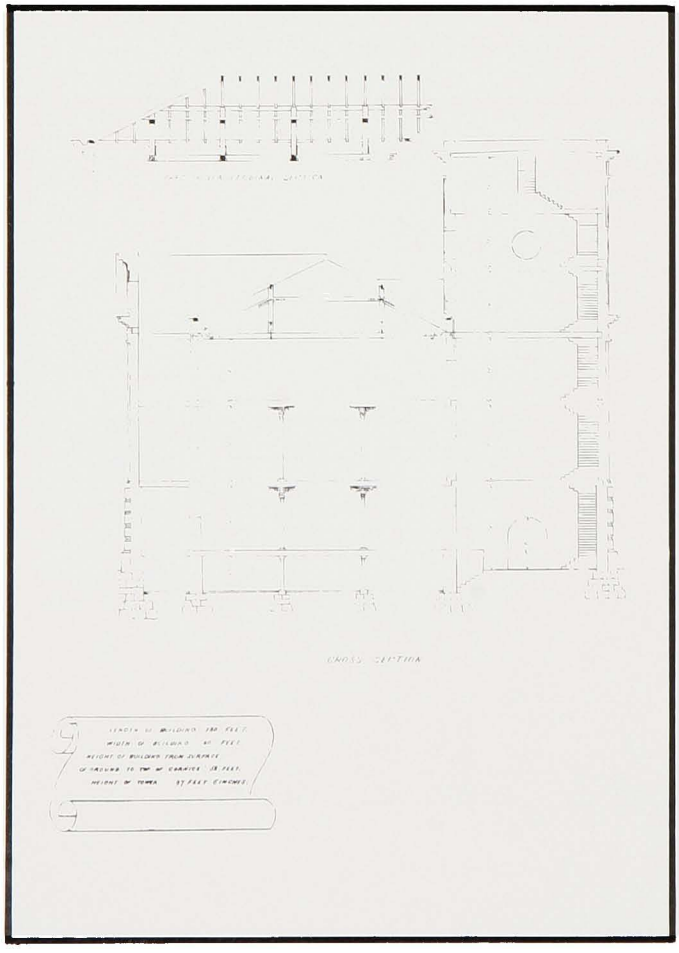
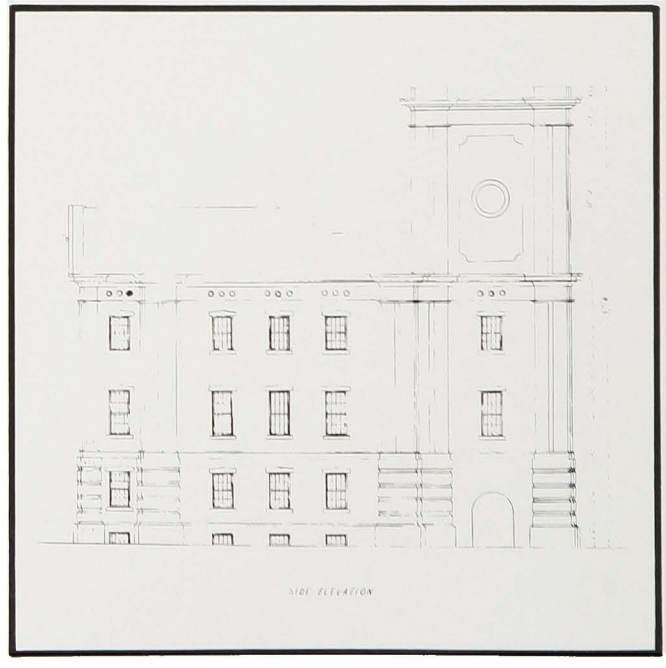


Fig. 6. Above. Top view of Storehouse A, Columbus Arsenal.

Fig. 7. Left. Structural view, Storehouse A, Columbus Arsenal.

Fig. 8. Bottom. Side view, Storehouse A, Columbus Arsenal.



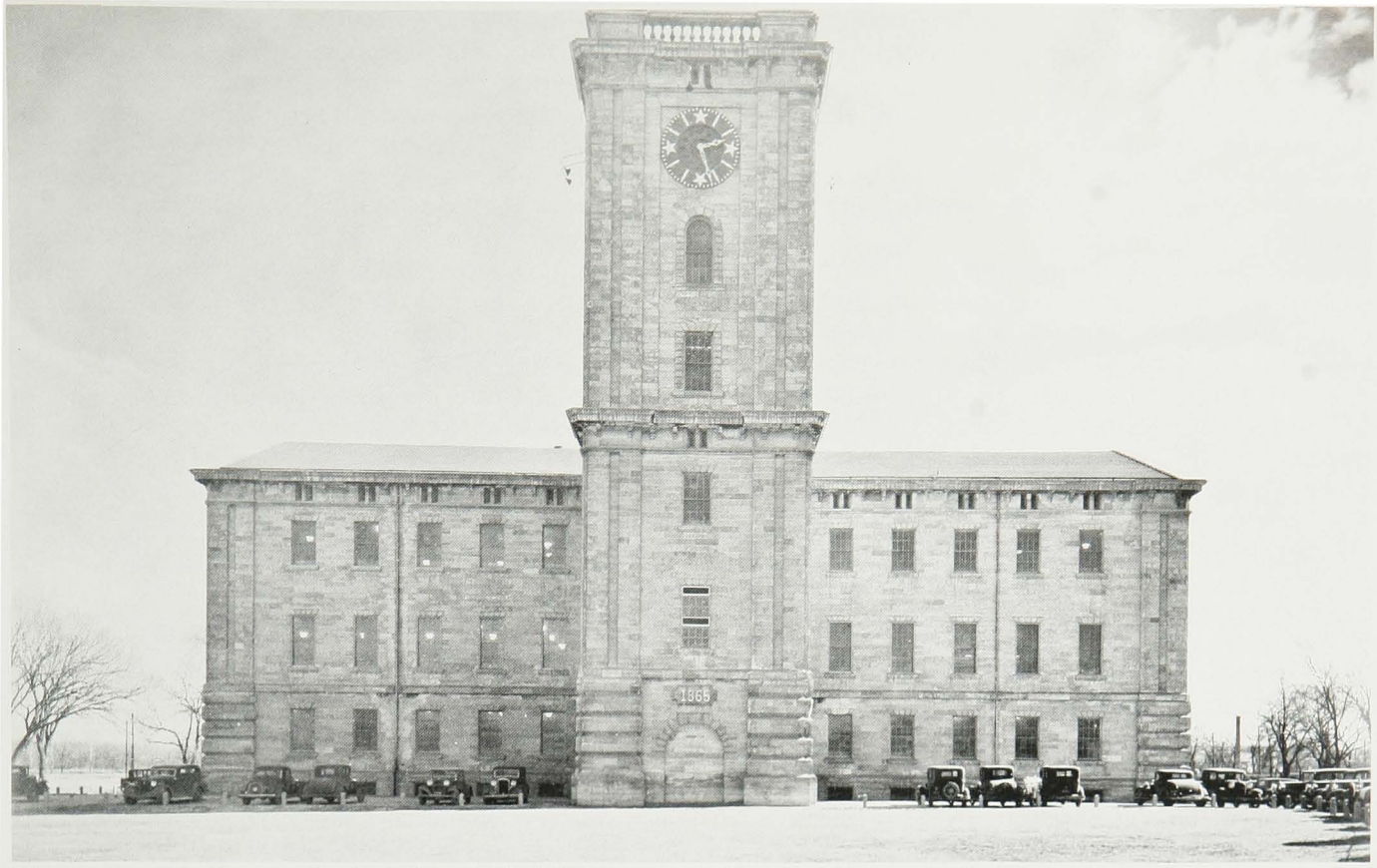


Fig. 9. Above. North view, the Rock Island Clock Tower Building.

Fig. 10. Below. Indianapolis Arsenal, now Arsenal Technical High School.
—Historic American Building Survey Photo.

Major Kingsbury's enthusiasm was further kindled by an unwritten understanding at the Ordnance Department that of the three arsenals authorized by the Act of July 11, the Rock Island Arsenal was destined to be the one to become the great western armory and arsenal, not only for the Civil War, but for the whole Northwest Territory.[24]

This explains Major Kingsbury's continuing attempts to alter the plans sent to him from Washington. He wished to make the Rock Island storehouse bigger and better than, and especially different from, those at Columbus and Indianapolis. Major Kingsbury's faith in this dream was eventually confirmed, of course, but not before he had resigned in frustration over the many problems encountered.

General Rodman did design the arsenal of earlier dreams, but the building Major Kingsbury was sent to build as the first building of that arsenal was eventually bypassed as the main arsenal moved to a better location toward the middle of Rock Island.

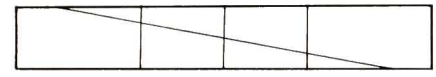
Unfortunately, enthusiasm was not enough in the summer of 1863. Major Kingsbury arrived in the midst of a major war effort. Material and workers were both in short supply in the area due to the rapidity with which the large camp for Confederate prisoners was being constructed. As many as five military camps were located near the Island during the War,[25] adding to the drain on men and supplies. The Government had no extra troops to defend the island against encroachments from squatters and business interests.

Political tempers flared on both sides of the river, and even nature added to the difficulties. River levels dropped so low in 1863 and 1864 as to virtually stop transportation of supplies. As a result, the project which should have taken little more than a year dragged on until early 1868.

Major Kingsbury wrote to the Ordnance Department shortly after his arrival requesting more details as to how to proceed and stating the first of many complaints about the durability and workability of the LeClaire limestone he had been ordered to use.

General Ripley replied that he had designated the LeClaire stone only because it was "the best of which this office was aware."[26] "If you find something better," General Ripley continued, "please report, with your reasons for doing it."[27] He further informed Major Kingsbury that the choice of workmen, selection of a master builder to construct the building, and all decisions about supplies were to be made in Rock Island.

By September 1 Major Kingsbury had hired a master builder and twenty workmen, and had acquired the wheelbarrows, picks, and spades necessary to begin work. In contrast to detailed specifications on modern architectural plans, the plans Major Kingsbury had to work with showed only the basic dimensions, together with a few other specifications. A master builder in 1863 had to be enough of an artisan to construct the entire building from these plans, using his own methods. The plans were too sparse for the cautious Major. He wrote frequently for additional information. Notice, for instance, that the plans only show the basement windows down to ground level. Did they continue on down? General Ripley replied in a letter of September 10:

> I have to acknowlege your letter of the 3d inst. calling attention to some points in connection with the drawings of the Arsenal building and in reply have to state, 1st only half of the windows of the basement is shown. 2nd. The distance between centers of columns should be 19′ 5 and 1/3″. 3rd The timbers interpassing between the capitals of the lower and the bases of the upper tier of iron columns are the girders which run across the building and support the joists in the same manner shown in "part of longitudinal section," 4th The capitals and bases of columns are merely ornamental, separate from the column — while the column itself passes through the girder, and rests upon the lower one. The girder is of wood. 5th The flooring joists extend only from one girder to another, but the girder extends across the building, and if timber of the required length, viz. 58′ cannot be found, it will have to be joined thus
>
> 
>
> 6th The dimension of the timber for the roof frames are deemed not too large for a building of this size. A sketch with correct dimensions is enclosed herewith.

Ground for Storehouse A was broken on September 3, 1863, at approximately the site selected by the board of officers on May 4: a latitude and longitude of 41° 31′ North — 90° 33′ West. Because the building was close to the Davenport side of the island, and because it faced Davenport rather than facing directly downriver, Major Kingsbury ran into another of his increasing problems with Rock Island citizens. It did not help to explain that the building had been laid out in relation to an existing wooden building and the site of Fort Armstrong nearby, or that it had been located on the Davenport side to be near the main channel of the Mississippi for ease in transporting supplies back and forth. Rock Island citizens felt it only proper that the Arsenal face the foe — south (and, of course, toward Rock Island). The fact that Major Kingsbury hired his master builder and all his workmen, and obtained all his supplies from Davenport did not help.

Fig. 11. Rodman House on Arsenal Island, officially known as Quarters No. 1.

The *Argus* found it especially strange that the storehouse faced neither directly north, south, nor west, but instead directly faced the Burtis House in Davenport, where Major Kingsbury had established headquarters.[28] "Congress needs to be straightened out," said an *Argus* editorial. The Burtis House is "the headquarters of shoulder straps, billiard and card players, and whiskey drinkers, and other accompanying recreation."[29]

Relations between Rock Island and Major Kingsbury did not improve. An *Argus* editorial of September 5 pointed out that the Government already owned a house on the Arsenal grounds that could be used by Major Kingsbury as a headquarters. Since only one blockhouse remained standing at Fort Armstrong, the house referred to here may well be the one identified as General Winfield Scott's headquarters in that early etching (Fig. 1).

Major Kingsbury, continued the editorial, had turned out to be a "man of small calibre," who had put the work in charge of "a sleepy man who expects to take until winter to do a job that an energetic man could do in 4 weeks."[30]

Late in October an *Argus* reporter found Major Kingsbury "slowly pegging away" at the uncompleted basement excavation and concluded that "from the energy displayed by Major Kingsbury, we should think he would be able to expend the appropriation some time within the next hundred years."[31]

Such criticism, at least in the fall of 1863, was not justified by the progress which Major Kingsbury and his men actually made. The unspoken cause of much of this criticism was the Major's opposition to an illegal bridge being built to the Island by Rock Island commercial interests. In spite of repeated complaints by United States Agents on the Island to the Secretary of War, to the Ordnance Department, and to Quartermaster General Montgomery Meigs, no official attempt had been made to stop the bridge construction. Though it had not been approved, and military policy was against it, it was nearing completion when Major Kingsbury arrived.

Not only did the bridge make defense of the Island more difficult; with the erection of the prisoner-of-war camp on the Island, the same Rock Island businessmen were pushing ahead with a road from the bridge across the Island to the prison, the better to conduct a lucrative supply business. The road not only cut across Arsenal grounds, but came very near the storehouse site, interfering with construction and with safety. Major Kingsbury's vigorous opposition to the bridge and to other encroachments of Government lands by squatters and timber cutters was the real reason for public complaints about him.

Major Kingsbury answered his critics, who were also now complaining that the building was on bad ground and was being built of the wrong materials, by ignoring them and proceeding with the work. While the basement was being excavated, he supervised the erection of a wooden frame workshop, 30 feet by 150 feet, to be used by carpenters and stonecutters during the coming winter. This shed is probably the long building which appears just to the right of the storehouse itself on the 1865 map (Fig. 2).

Fall was also busy with advertising and receiving bids for quarrying, dressing, and delivering stone, and for the white oak flooring. Proposals for the LeClaire limestone were due October 5th. From these bids Major Kingsbury selected Joseph Parkins of Madison, Wisconsin. On November 19, 1863, Parkins was awarded a contract to furnish LeClaire stone for Storehouse A at a price of $7.50 per perch of 25 cubic feet "to be measured in the walls." All of the stone was to be delivered by August 1, 1864. Major Kingsbury hoped to get the stone cut at the quarry by the end of December.

On November 14, 1863, Major Kingsbury awarded a contract for 20,000 feet of white oak flooring to be delivered by June 15, 1864, to Mr. L. Schrieker.[32]

Meanwhile, the excavation for the basement was completed in November. The rest of the winter was devoted to finishing the construction

of the temporary shops. In spite of the fact that the winter of 1863-64 was the severest Rock Island had experienced for many decades,[33] preparations went on quite well. Beginning in January, Major Kingsbury began submitting weekly reports of work done.

By the end of February Major Kingsbury had purchased two work horses, a wagon, a cart, and harnesses for both.[34] Several thousand perch of stone at the quarry were ready for shipment downriver as soon as the ice left. At the site itself, carpenters had been busy making window sash from "a considerable quantity" of oak timbers from Fort Armstrong — well seasoned wood over 35 years old.[35]

Major Kingsbury had earlier requested a guard of Ordnance soldiers to protect the increasing supplies stored at the building site. Wartime made this impossible, but on February 26 the Ordnance Department notified Major Kingsbury that "the Adjutant General has been requested to assign a Company or less, of Invalids, under the Command of a Captain of experience and of known good habits."[36] Major Kingsbury replied that ten to fifteen men of the Invalid Corps would be acceptable,[37] and on March 15 they arrived.

Both trouble and work stepped up as spring approached. For some reason, Major Kingsbury and the prison commander, Colonel A. J. Johnson, had never gotten along since their arrival at about the same time the previous summer. Perhaps the competition for men and supplies was responsible. Major Kingsbury complained to General Ramsay, now Chief of Ordnance, in March that the officer in charge of the prison barracks was cutting timber around the Arsenal grounds. There were other annoyances. Prison sentries often exceeded their duties by stopping known Arsenal workers to check identification. Several notes about these incidents written by Major Kingsbury to Colonel Johnson went unanswered. The Ordnance Office also failed to respond.

These minor irritations inflamed tempers on both sides and came to a head in May. On May 10 a Private Nelson of Major Kingsbury's command was horsewhipped on the streets of Rock Island by Lt. Colonel Carrahar, Provost Marshal of the prison. Colonel Carrahar then threw Private Nelson in the prison guard house. Major Kingsbury was not even notified of the event for several days, and then only by a bystander who happened to see the event.[38] Although the outcome of Major Kingsbury's request to have Private Nelson released is not known, it is clear that having the Rock Island Prison on the same island as the Arsenal was not a pleasant experience for Major Kingsbury.

The Ordnance Department offered little consolation throughout this affair. In fact, the Chief of Ordnance and his assistants may well have come to regard Major Kingsbury as a chronic complainer. As his complaints grew, the replies from headquarters grew more terse. Most of his requests to change the specifications of Storehouse A, to add or enlarge, were denied (while his successor General Rodman's similar requests were all granted).

Finally, on March 20, 1865, he received a severe reprimand from General Dyer, who had become Chief of Ordnance, for criticising General Ramsay for inaction. Major Kingsbury had written to General Dyer to demand action on his problems with the Rock Island Prison. "I entirely agree with my predecessor," wrote General Dyer, "that the information communicated is not in such a shape that I can submit it to higher authority." Further, "it is not deemed proper to recommend removal of the Prisoners from Rock Island at this time."[39]

Beginning in the spring of 1864 another problem served to add to Major Kingsbury's growing frustration. The surrounding states were organizing regiments for the war effort. Several camps and cities were designated as rendezvous points for these recruits. Arms and ordnance supplies had to be shipped to these rendezvous points from eastern arsenals. In May the Ordnance Department appointed Major Kingsbury to be in charge of these supplies in all surrounding states. Since these camps ranged as much as several hundred miles from Rock Island, Major Kingsbury had to either sign for these issues without seeing them, or leave his command at the Arsenal for days at a time to accompany the supplies. His requests to the Ordnance Department to have some other officer appointed resulted in no action, and so he spent much of his time until after the end of the War disbursing and receiving arms and supplies.

In spite of these interruptions and frustrations, work went well during the spring of 1864. A railway was laid from the stone contractor's derrick on the banks of the Mississippi to the building site, and completely around it. Stone could be unloaded from the flatboats on to rail cars and delivered to the exact place along the walls where it was needed. Rails were also laid around the inside of the walls so that trucks with builder's derricks on them could be easily moved where needed. Finally, "an ingenious pumping apparatus"[40] was constructed so that water could be brought to the site from the river by steam power.

A small amount of stone was delivered from LeClaire at the beginning of April, allowing Ma-

jor Kingsbury to begin work on the foundation on April 6. During the next two weeks workmen installed a system of drains running under the building to the river. Figure 12 shows the drains uncovered during renovation of the building in 1934. Workmen also finished the concrete work and leveling-up preparatory to beginning the stonework.[41]

The first major event at the site took place on April 21, 1864, with the laying of the cornerstone during an appropriate ceremony.[42] The ceremony took place at 11:00 in the morning at the northwest corner of the building. Stone workers had cut a hole in a rectangular stone to a depth of six or seven inches. In this hole Major Kingsbury placed a sealed and tarred tin box. The box was cemented in place, and the stone turned over by derrick to its place in the wall.

Inside the box were several interesting items. Among these were copies of the Rock Island *Daily and Weekly Union*, the Davenport *Gazette*, and the Davenport *Democrat and News*. Interestingly, none of the contemporary accounts list the Major's constant critic, the Rock Island *Argus*, as being included, nor was the cornerstone ceremony itself covered or mentioned by the *Argus*. Also included in the cornerstone was a 50-cent piece captured in Sherman's raid and a paper stating the date of laying the stone, "being the 21st day of April, 1864, and of the Independence of the United States the 88th, and the fourth year of the great slaveholder's rebellion for the extension of African slavery or the disruption of the Union."[43] On this paper was also listed the President of the United States, Abraham Lincoln; the Governor of Illinois, Richard Yates; Commander of the Arsenal, C. P. Kingsbury; the master mechanic, W. Channon; and the master mason, R. Lloyd.

A puzzling footnote to the cornerstone ceremony is the fact that its exact location has never been discovered. The cornerstone was to have been opened in 1966 as part of the celebration of the centennial of the Rock Island District Corps of Engineers, but metal detectors, Corps and Arsenal personnel, and members of the National Guard were unable to locate it.

One problem in locating the cornerstone lies with the "northwest angle." The Clock Tower Building does not lie straight east and west. What is today regarded as the "northeast corner" may well have been regarded as the northwest corner in 1867, since it lies so much farther north than the northwest corner. Also, along this stretch of river where the Mississippi runs almost directly east and west rather than north and south, directions have often been confused in surveys and other official reports.

Another problem adding to the cornerstone mystery is that the drainage areaway surrounding the building has been filled in with concrete up to about the third tier of stone. Since the cornerstone was laid within a few days after the stonework on the building had begun, it very probably rests in the first or second tier of stone along the outside of the wall. If so, and if the cornerstone was placed at what is today considered the northwest angle of the building, then it likely remains safely protected by one or two feet of concrete.

The Clock Tower building thus joins a number of other public buildings with lost cornerstones, among them the nation's Capitol, the White House, the Washington Monument, and the original Smithsonian Institution.

While progress on construction was going well during April, Major Kingsbury also scored a major victory — one of very few — arising from his complaints to headquarters. Major Kingsbury had always anticipated a future great arsenal and armory on the island. Ever since his arrival, he had urged the Ordnance Department and Congress to pass legislation clearing all private businesses and homes from the area. He was especially concerned about the Davenport Farm, which crossed the Island between the Arsenal and the Rock Island Prison, nearly cutting the Government land in half and making any great expansion of the Arsenal almost impossible. Smaller private lots and houses were scattered throughout the island, making security a problem.

In April 1864 Congress finally passed the act which Major Kingsbury had so long urged, to purchase and take possession of all remaining private and lease-held land on Rock Island. Although the Board of Commissioners to adjust these claims was not appointed until June 27, 1866, Major Kingsbury must be given credit for making the present Rock Island Arsenal a possibility.

Rumors of a revised and larger arsenal at Rock Island were apparently again strong enough in the spring of 1864, spurred on by the Congressional act, for Major Kingsbury to suggest in a letter to General Ramsay that work be suspended for the present on Storehouse A "in view of the possibility of a change in the general plan for the Arsenal affecting the location of the main Arsenal."[44] The reply, if any, was negative, and work continued.

While waiting for more stone to be delivered to the building site in April and May, Major Kingsbury attempted to get the Ordnance Department to agree to several changes in the building plan. He found most dissatisfaction with

Fig. 12. The cast iron drain system beneath the Clock Tower Building, exposed during remodeling.

the tower. The stairs along the north side seemed both too narrow and awkwardly placed. The tower walls seemed too weak to support a hoist. But as usual, General Ramsay replied in the negative:

> The risers and treads whose dimensions are given on the plan are thought to be fully large enough Your proposal to add six inches to the wall is not approved as the present thickness is deemed sufficiently strong to withstand any weight which may be put upon it.[45]

Major Kingsbury also requested changes in the ornamentation of the building. Denying this, too, General Ramsay replied that "the changes proposed by you in the first story of the Pediment of the Arsenal is not deemed advisable."[46] While General Ramsay did agree to slight changes in the tower stairs, and agreed to add doors in place of windows at each end of the main building, his increasing firmness toward Major Kingsbury is evident in the last line of the letter: "You will please be guided by the drawing in the matter."[47]

The small amount of stone which Major Kingsbury had received from the contractor, Joseph Parkins, in March and early April turned out to be the only stone received during the remainder of the spring. The Civil War had created a widely fluctuating currency. Between November of 1863 when Parkins signed his contract and the spring of 1864, United States currency had depreciated 30 per cent. The cost of labor had also soared. As a result, Parkins stopped delivery of the stone, claiming he was losing money at the contract rate. On June 29, 1864, the Secretary of War issued him a new contract, raising the old rate of $7.50 per perch to $10.50.

Parkins, however, complained that he was still losing money, that he was out of funds, and that he could not continue without an advance of money. His request to be paid at the new rate for stone already delivered, however, was disapproved.[48] Finally, the Chief of Ordnance agreed to pay Parkins $3.50 per perch for stone Parkins had quarried at LeClaire, but had not yet floated downriver, and also to pay him all of the percentage money (25%) which the Government was to have held until the contract was completed.

Before all of this was straightened out, nature intervened. During the summer of 1864 the Mississippi River fell to a record low — so low that it has been used as the low water mark (zero on the scale) for all future measurements. Neither Parkins nor the Government were able to transport stone by water.

Between the river and the contractor's financial problems, very little stone was delivered during the fall and winter of 1864-65. The contract for the white oak flooring went into default as well. All work on the building was brought to a virtual standstill during this period.

The problems with Parkins did not diminish, but grew more complex. In the spring of 1865 General Dyer ordered Major Kingsbury to pay Parkins for all of the stone still at the quarry, subtracting from the price of $10.50 per perch the cost of hauling the stone to Rock Island.[49]

General Rodman continued to have problems with Parkins after he had taken over command of the Arsenal from Major Kingsbury. Parkins complained that he was still being paid too little and eventually appealed to Congress for relief. On

July 3, 1866, Congress approved "Private Resolution No. 12," which authorized the accounting office of the War Department to pay Parkins, in lieu of the contract price, $13.50 per perch for all the stone already delivered and to be delivered.

Although payment was made on condition that Parkins would make no further claims, he immediately requested that he be allowed additional compensation to cover expense and loss resulting from changes made in the building by Major Kingsbury and General Rodman. He demanded compensation for the window openings, doors, and added projections. After much controversy, Parkins was granted $13.50 per perch using "builder's measurement" according to the custom of surrounding cities. This meant that Parkins was paid by the volume of the stone "in the wall" rather than according to the actual measurement of the stone. In the wall volume measurement included all door and window openings. Final payment to Parkins was made on August 13, 1867, just several months before the building was actually completed.[50]

But the Parkins case was not over. In 1868, a year after Storehouse A was completed, James W. Harvey made a claim against the Government for further payment. Harvey claimed that he had advanced Parkins $10,000 in the spring of 1865 to permit Parkins to complete his contract to furnish stone. He further stated that after being paid by the Government in 1867, Parkins had disappeared, leaving Harvey and two other creditors $15,000 short.

Harvey pointed out that Parkins had additional good claims against the Government, for which he, Harvey, was applying. $3,850 of the money claimed by Harvey was for the increased value of stone used on the interior of the building, which should have been used, by contract, only on the exterior walls. This had already been allowed by the Ordnance Department, and Parkins was credited with it on Major Kingsbury's books. Originally, the interior wall stone was not to have been surfaced (or bush-hammered) as it was on the exterior. A good example of such unsurfaced stone still showing quarry marks can be seen today at the ground level inside the tower. A smoother, surfaced stone of the kind Harvey was talking about is still visible at the gable ends of the attic in the main building.

Harvey also claimed $4,500 for the additional stone and extra cutting required by changes made in the cornices by General Rodman. However, Harvey was allowed only the $3,850.

The trouble with Parkins added to Major Kingsbury's growing bitterness about the whole project. When, in the spring of 1865, he was reprimanded by headquarters for failing to send in his weekly reports, he replied that he felt his earlier reports were receiving no attention.[51] In addition, the end of the Civil War in April brought Major Kingsbury mustering-out duties. During the remainder of the spring he was responsible for receiving supplies from many of the same troops he had earlier equipped. Rock Island Arsenal became a collection point for captured and turned-in arms and field pieces. The result was that by June of 1865, Storehouse A was little further along than it had been when the cornerstone was laid the year before.

After two years of frustration, delays, and suspicions, Major Kingsbury requested to be relieved of command of the Rock Island Arsenal. On June 16, 1865, General Dyer, Chief of Ordnance, issued "Special Order No. 303" relieving Major Kingsbury of his duties at Rock Island and assigning him to command of the Watertown Arsenal. The commander of the Watertown Arsenal, General Rodman, was, in turn, ordered to Rock Island.

The same order relieving Major Kingsbury of his duties assigned Lieutenant J. A. Kress to Rock Island to direct the work until General Rodman could arrive in August. Lieutenant Kress arrived to begin his assignment on June 25, 1865.

Major Kingsbury had no building to show for his efforts, but it was he who kept alive the idea of Rock Island as a great western armory and arsenal, often by annoying and alienating the Ordnance Office, until Congress and the Army were ready to move. Of the original $100,000 appropriated by the Act of July 11, 1862, and an additional $73,000 appropriated by the Act of March 3, 1865, Major Kingsbury had spent only $59,697.21. Of this, $28,647.28 was expended in the 1863-64 fiscal year (July 1 to June 30) and $31,049.93 in 1864-65. By contrast, General Rodman spent $137,902.67 the following fiscal year.[52]

In taking leave of the Rock Island Arsenal, Major Kingsbury wrote to the Ordnance Department: "Having been ordered hence at his own request, Major Kingsbury transfers his duties to his successor with the hope that the latter will not be tried with the numerous delays and vexations which have attended the period of his connection with the Rock Island Arsenal."[53]

The news that the famous General Rodman was coming was welcomed by area citizens for it indicated that the Ordnance Department was beginning to think more seriously about an expanded arsenal at Rock Island.[54] General Rodman was commander of the Watertown Arsenal, and had proved valuable to the Army in many ways; but he was chiefly known to the public as the inventor and developer of the Rodman Gun.

His appointment was not a sudden decision. Throughout the previous fall and winter General Rodman and General Dyer held many discussions about a new arsenal and armory at Rock Island.[55] Earlier in 1864 General Ramsay had written to the Secretary of War that "he had in his possession plans for a new and larger arsenal and armory than any now in the country — plans based on the experience of Major Dyer, then in charge of the Springfield Arsenal, and others."[56] General Ramsay had suggested at one point that work on Storehouse A at Rock Island be suspended "as its plans might have to be materially changed."[57]

In early May of 1865 General Dyer visited Rock Island to examine it carefully. During this trip he discussed these new plans with Major Kingsbury.[58]

When Lieutenant Kress took over temporary command from Major Kingsbury in June, Storehouse A had not yet been completed to the top of the first story. During the period until General Rodman's arrival in August, Lieutenant (now Captain) Kress served mostly as a disbursing officer. He was responsible for one new contract: with the William Thompson Foundry of Rock Island for the cast iron columns and brackets to be used on the first and second floors of the storehouse. Other action was deferred pending General Rodman's arrival.

General Rodman did arrive the first week of August, 1865, but only to examine the island and locations for the revised arsenal plans. On August 21 he received a request from General Dyer to meet in New York on September 1 to discuss the future arsenal. Some plans had already been drawn, but General Rodman was to have a large part in the decisions to be made.[59] During this conference in September the present arsenal was born. Generals Dyer and Rodman worked out agreements on its plan, its magnitude, and its capacity.[60]

During the following winter in Rock Island, General Rodman finished plans for the new arsenal. These plans included removal of the Chicago, Rock Island, and Pacific Railroad tracks which crossed the center of the island to a new location at the western tip a short distance from Storehouse A. The new arsenal was far larger than originally intended in 1862. Specifications called for buildings, machinery, and power capable of manufacturing "500 muskets in 10 hours."[61]

General Rodman's plans called for moving the arsenal complex nearer the center of the island where there was more space. Previous plans were scrapped. Only Storehouse A and a magazine which Major Kingsbury had already begun were completed; but even as they were being finished, General Rodman recognized that they would not be part of the main arsenal. An *Argus* editorial of October 10, 1865, noting that the building was progressing slowly, was headlined "We Were Right." "The building was projected on too small a plan, and located in a bad place, as is now admitted by all."[62]

While General Rodman's new plans sentenced Storehouse A to a minor role even before it was finished, he did not take its completion lightly. He not only completed construction as rapidly as possible, he made changes in the design which improved the building's usefulness and made it a more imposing structure.

General Rodman's requests to make these changes were granted as freely as Major Kingsbury's similar requests were denied earlier. The first major change was to the roof line. In a letter to General Rodman on January 20, 1866, General Dyer wrote: "I have to acknowledge your letter of 17th ins. and to state that your proposed alteration of the plan of Arsenal building, by putting gables in the ends of the building with windows in each to light and ventilate the loft is approved."[63]

By November 1866 the shell of the main building was finished. A workforce that reached 400 men had been employed during the summer and fall.[64] The main roof had been slated in by J. H. Dumont of Rock Island, and copper guttering and spouts had been installed.[65] All that remained to do the following season was to build the tower; floor the main building; fur, plaster, and wainscot the walls; and install ceilings of painted, seasoned pine. Storehouse A would then have room for arming 150,000 men, and would be "positively fire proof."[66]

The clock tower, which eventually gave the building its name, was built during the summer of 1867. Its primary purpose was to serve as a support for the main hoist which lifted supplies to the floors of the main building. This hoist was operated by a winch mechanism on the fifth floor of the tower. Openings for this hoist were located in the center of each floor, and were surrounded by wooden balustrades.

To support this hoisting equipment, the tower floors were made especially sturdy. Each floor consisted of wooden joists resting on two large timber girders at the third points. Each of these girders, in turn, was trussed underneath by two iron rods separated from the girder at mid-point by an iron king post. This truss system can still be seen from the tower stairs going up to the fifth floor.

General Rodman raised the clock tower twenty feet higher than the original plans called for, presumably because his changes to the roof had

raised the roof line, and perhaps also so that the clock could be better seen by the surrounding area from the relatively low building site (a site which had become even more obscure by the new railroad embankment to the west of the Clock Tower Building).

While waiting for permission to issue a new contract for oak flooring (the old contract of 1863 having gone into default), General Rodman corrected several mistakes in earlier construction which had now become apparent. He removed the girders on which the floor joists rested on the first, second, and third floors, and replaced them with beams twice the size bolted together with iron bolts. This fault, which lay either with the master mechanic, Mr. Channon, or with Major Kingsbury, cost the Government between six and seven thousand dollars. The iron columns were also found to be defective and had to be recast at the Thompson Foundry.[67]

However, when the main building was completed and ready late in the fall of 1867, even the normally critical *Argus* was enthusiastic. The three main floors were laid on floor joists of white pine, 3″ by 14″, set on 12″ centers. Flooring consisted of a double layer of white pine and oak. The three floors provided about 35,000 square feet of floor space designed to sustain 270 pounds per square foot. The walls of the first two floors above the basement were lathed, plastered, and wainscotted. The basement columns were of stone, while above these and resting on them were two rows of cast iron columns for the next two floors.

The ceiling of the third floor was suspended from trussed roof beams of white pine, leaving the floor free of all obstructions. "A splendid room for a dance on opening the building," wrote the *Argus*.[68]

The truss system used in the roof of the Clock Tower Building (Figs. 13, 14) is not unusual, but it does reveal very conservative construction methods for its day. By 1865 most such systems would have made much more use of iron plate and rods, replacing the notched beams and dovetailing evident in the Clock Tower construction. Most of the iron plates and all of the rods which are there now were installed by the Corps of Engineers in 1934 prior to making it their district office.

In addition to the main hoist in the tower, General Rodman installed two interior hoists in the main building approximately 60 feet from the east and west ends. The shaft and attic framework of the west hoist eventually became the present passenger elevator. The large wooden wheel and windlass of the east hoist can be seen today still in place between the rafters, complete with rope and hook.

The Clock Tower Building as it was finally constructed has a foundation four feet thick. The first floor walls are three feet deep, while the upper stories are two and one-half feet thick. The estimated cost of the complete structure was about $200,000.[69]

Although the tower on the north side of the building was built primarily to contain the main hoisting apparatus, the clock on the sixth floor has come to be the outstanding feature of the building. The tower was the last part of the building to be constructed, but by December of 1867 it was finished and ready for the clock.

Original plans called for a relatively unassuming clock face six feet in diameter carved into the stone of the tower. The four unique clock dials which General Rodman installed on the Rock Island building are wooden faces, 12 feet in diameter — twice the original specifications. (See Fig. 15.) Around the center in a 6-foot circle are 12 glass portholes at the hour points. Near the edge of the dials an arrangement of "stars and bars" mark off the hours, with stars representing the hours of 3, 6, 9, and 12, and bars representing the remaining hours. At the very edge of the dials, small raised bars mark off the minutes. The dials and markings are all of wood, as are the carved hands. The hands and markings were painted white to set them off from the black dial.

General Rodman ordered the clockworks from A. S. Hotchkiss of New York, a nationally-known clockmaker. The works were made at the Hotchkiss shop in Williamsburg, New York. On December 30, 1867, Mr. Hotchkiss arrived in Rock Island with the works to begin assembling his clock.

The clockworks sit today where they were installed in 1868, along the east wall of the sixth floor of the tower. (See Figs. 16, 17.) They sit in a solid frame of cast iron 7′ 9″ long, supported by four iron columns.

The time main wheel 3 feet in diameter revolves once in 12 hours. It has the hours painted on its face and a pointer denoting the hour of the day. The second wheel is 27″ in diameter and revolves every hour. Minutes are painted on its face with a pointer denoting the minute of the hour. The second wheel also has a lifting pin attached to unlock the striking mechanism. The escape wheel, 8½″ in diameter, revolves in 3 minutes and has the seconds pointed off. This arrangement of wheels and numbers precluded the necessity of any dial work on the movement.

The escape wheel has 30 special pins of a shape designed by Mr. Hotchkiss to prevent oil being attracted to the wheel. This leaves the pins dry and solves one of the main problems of pin escapements. The pallets are of agate, with both pins and pallets having a high polish.

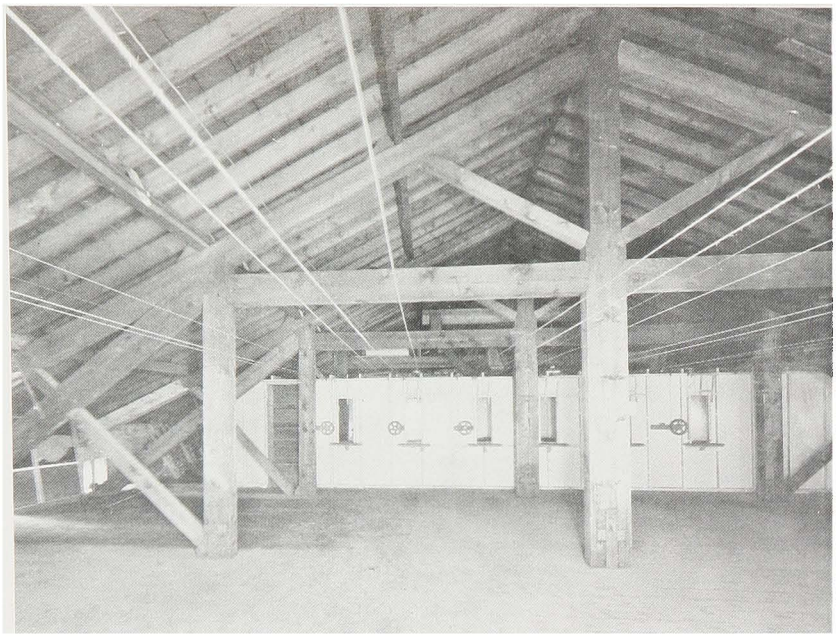


Fig. 13. Roof trusses in the attic of the Clock Tower Building.

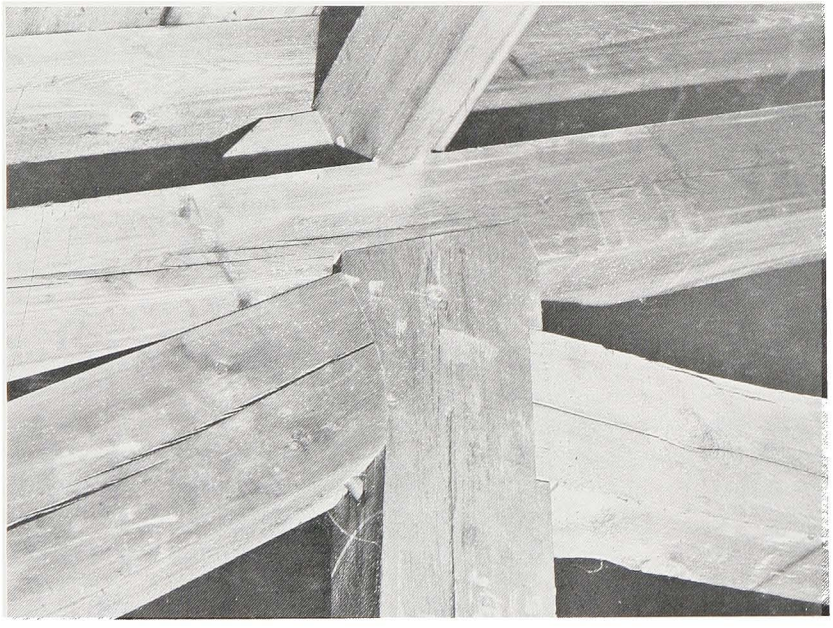


Fig. 14. Close-up view of wood joints in the truss system of the Clock Tower Building.

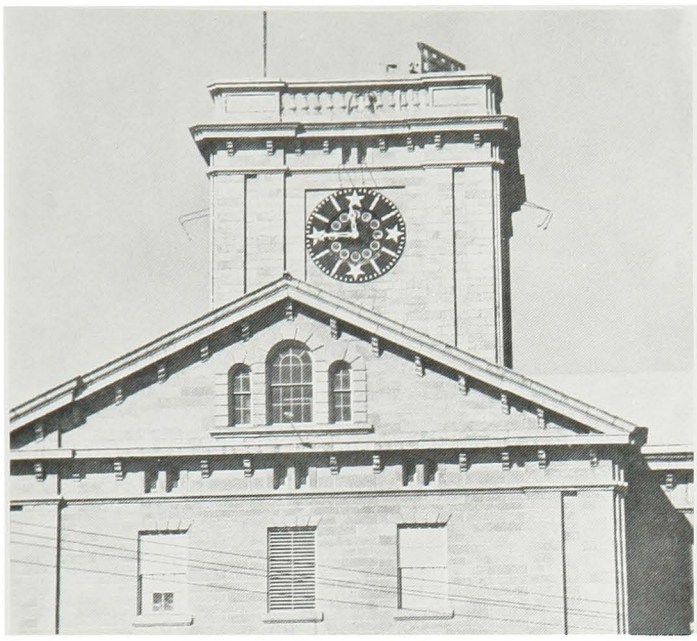
The main strike wheel has 32 steel rollers for raising the hammer. All of the wheels in the works are made of bronze (gun metal); the journals or bearings are bossed with the same metal. The pinions are made of steel, while the wheels used for winding the clock are of engine-cut and polished iron.[71]

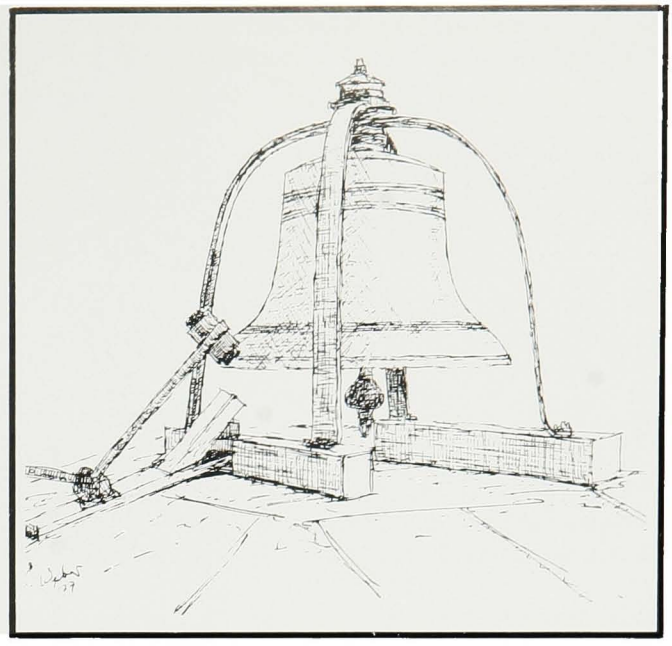
A system of rods and gears running from the works to the center of the room and from there to the four dials runs all four sets of clock hands. (See Fig. 18.)

The pendulum hangs down through two stories of the tower. Its wood shaft and 350 pound ball vibrate every 3 seconds. Its length to center of oscillation is 29′ 6″, giving a whole length of nearly 32 feet.

The clock works run so smoothly that only a 150 pound weight is needed to drive the time, with 250 pounds needed to operate the striking mechanism. This contrasts with the 700 pounds usually needed for a clock of this size.[72]

The weights are suspended by wire rope from a spiral-grooved drum 18″ in diameter. They hang down through three floors, 1,000 pounds on one side and 1,200 pounds on the other. The clock was originally wound by hand, a job that took two men twenty minutes once each week.





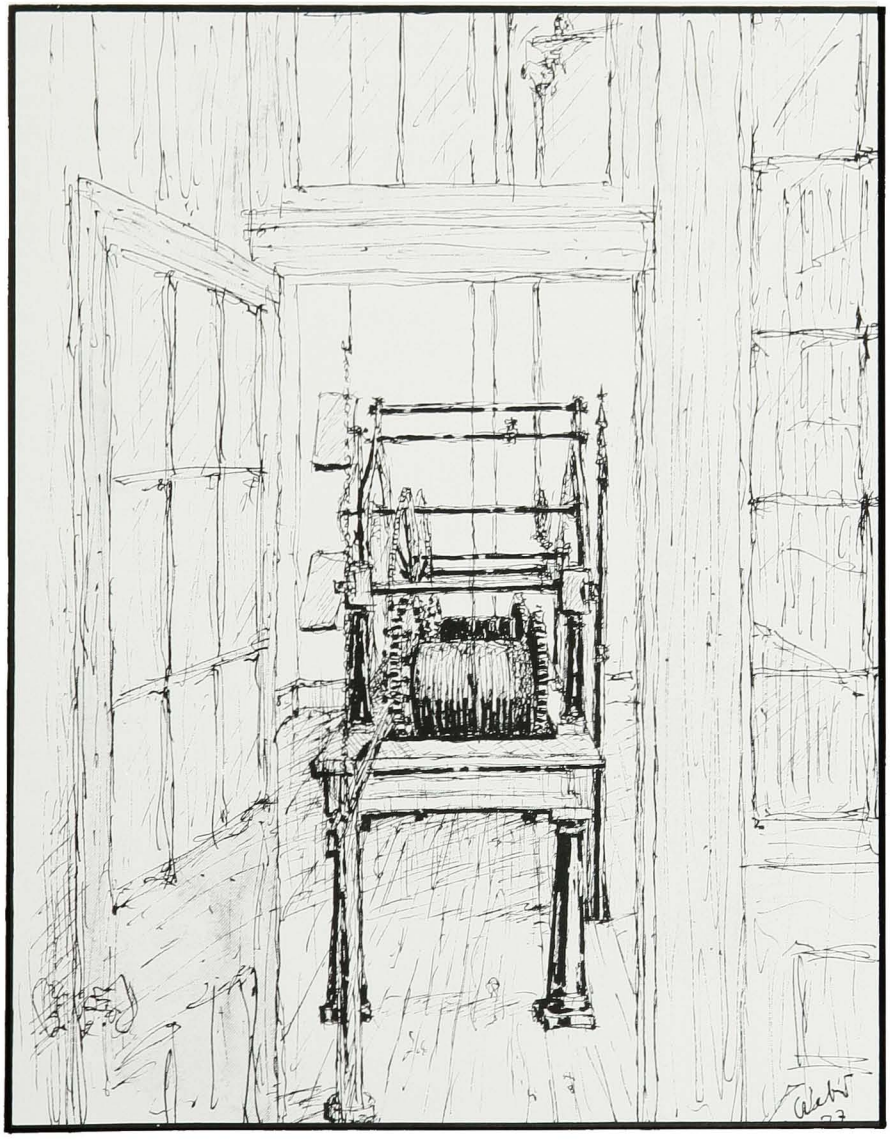


Fig. 15. Above, left. The south clock face of the tower clock.

Fig. 16. Above, right. The bell and hammer mechanism on the roof of the Clock Tower Building.

—Pen and Ink Sketch by Erwin Weber

Fig. 17. The main clockworks on the sixth floor of the tower, installed in 1868. The works are enclosed by wood and glass partitions.

—Pen and Ink Sketch by Erwin Weber

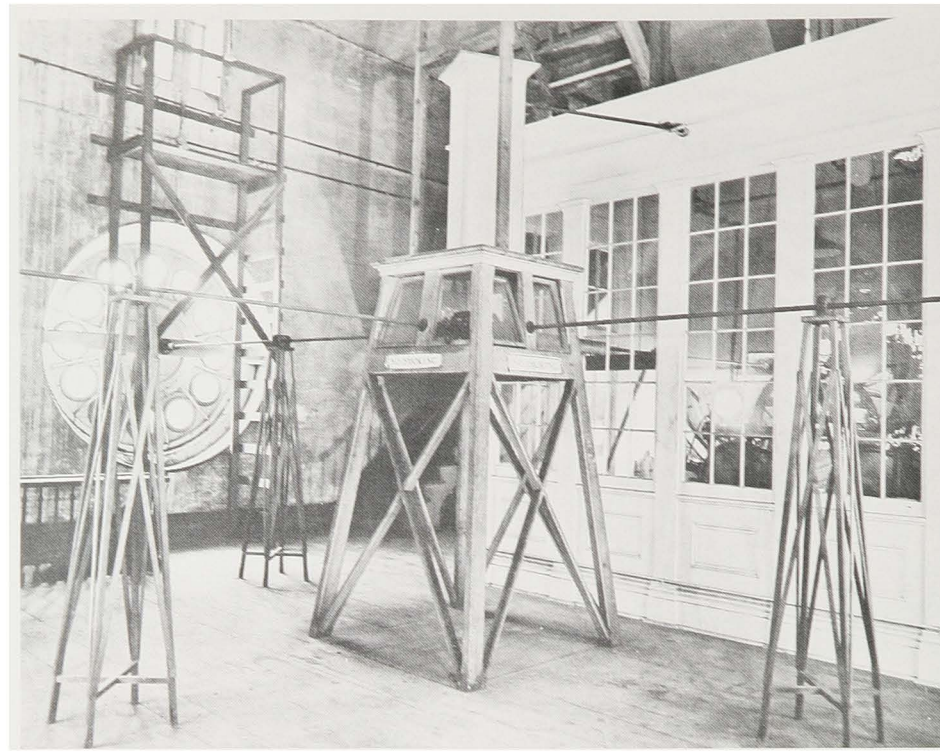


Fig. 18. The arrangement of gears from the clockworks to the four clock faces.

By January 20 Mr. Hotchkiss had the clock in perfect order. The works had been enclosed in a wood and glass case by Mr. G. F. Downes, head carpenter at the Arsenal. This case, which still surrounds the works today, is especially interesting in that it was done in the classical Greek revival style popular for many Rock Island and Davenport storefronts at the time.

An interesting sidelight to the clock's history is that Mr. Hotchkiss adjusted the clock to keep "the time of this locality,"[73] that is, the actual sun time on the Island. Nearly all of the businesses in the surrounding towns, however, kept "Chicago time," also called "railroad time" because Midwestern railroads ran by it. In 1868 there were more than 100 different time zones in the United States. Uniform zones were not established until November 18, 1883.[74] The result was that the Arsenal clock ran between 13 and 15 minutes behind most other clocks in the area.

In contrast to problems with other contractors, General Rodman's dealings with the clockmaker were more than satisfactory. The contract for purchase of the clock came to $5,000. For this amount, in addition to the works themselves, Mr. Hotchkiss supplied the wire rope for the weights, all gearing for the four dials, and all hands, pulleys, hammer, weights, and all other parts. He paid all the freight bills to the Arsenal and personally put the clock in position in perfect order without any additional charge. Further, he warranted his work and all the parts. Only the wood enclosure, built by the Arsenal, was extra.

The bell for the clock was bought from Fairbanks & Co., New York, and manufactured by E. A. and G. R. Meneely of West Troy, New York. The bell weighed 3,538 pounds. At 47 cents per pound, the cost of the bell came to $1,662.36.[75] A freight charge of $70.50 brought the total cost to $1,733.36.

Interestingly, the bell in the clock tower of the Indianapolis Arsenal appears to be identical to the Rock Island bell. Both are stamped "1867 Meneelys' West Troy, N.Y."[76] The clock works at Indianapolis were damaged in a fire to the point where identification is impossible, so there is no way of knowing whether their clock, too, is identical to the Rock Island clock.

Although the bell was installed in the open on the roof of the tower so that it could be heard clearly, it "might as well be in the cellar,"[77] according to one contemporary account. The stone wall and balustrade around the roof apparently muffled the sound. An *Argus* reporter suggested raising the bell higher and putting a weathervane on top to make the whole tower look "less unfinished."[78]

Local residents also complained that the site of the Clock Tower prevented the clock from being seen well from any of the surrounding towns.[79]

Other reports say that the bell could be heard for miles, and was so loud that it was eventually disconnected. In 1945, when the clockworks were extensively overhauled, the bell was reconnected and set at the lowest possible level. Today, it can be heard only faintly from the area around the tower.

Since it was first installed, the Hotchkiss clock has lived up to its reputation. From the first, it only lost or gained an average of ¼ minute per week in good weather.[80] Snow and ice occasionally slowed or jammed the hands in winter.

Until 1950 the clock was wound by hand. On the wall of the clock room, among a number of unofficial names and dates of times when repairs were made, is an entry dated July 7, 1907, which reads: "Carrie Passig and daughter Ruth and Hattie Pratt came with Papa (W. J.) Pratt to see him wind clock. Papa started to wind clock in 1867 and missed winding three times in 1867 to 1907."[81]

In 1950, on an experimental basis, the clock was switched over to electric winding. In 1955 motor and gear equipment was installed permanently. Otherwise, the clock still has all its original parts. At one time the clock tower clock may have had an identical twin installed by Hotchkiss in a New York church, but today it is the only known clock of its type still running.

With the installation of the clock and bell in 1868, Storehouse A was virtually complete, and General Rodman's attentions turned to the new Arsenal location to the east. Stairs were installed in the portico of the main building in 1871. During 1869, much dirt around the building was scraped away to provide fill for the railroad embankment crossing the west tip of the Island. This left Storehouse A about one and one-half feet higher than it had been.

From 1871 until 1930 it was used for the purpose for which it was designed: to receive, store, and issue military equipment. For the first decade or so, it was used to capacity, then more or less sporadically. In 1930 storage was shifted to more modern facilities at the Arsenal.

Just before or just after World War I (reports differ), the Army ordered Storehouse A — by now called the Clock Tower Building[82] — torn down, but this order was rescinded in response to local sentiment, and the building was saved.

Shortly before 1931 the building was struck by lightning, causing a fire that weakened several basement girders and did other minor smoke and fire damage.

Rock Island's two sister arsenals, built at the same time from the same plans, did not even fare as well as Storehouse A. The Columbus Arsenal closed in 1875, a victim of the success of the Rock Island Arsenal. The building at Columbus became a part of Fort Hayes for a time and is now a public technical high school. The Indianapolis Arsenal later met a similar fate. It was abandoned by the Federal Government on April 3, 1903, with the firing of the last sunrise gun.[83] It survives today, after extensive remodeling in 1932, as "Arsenal Technical High School," part of the vocational system of the Indianapolis public schools.

THE CLOCK TOWER BUILDING AND THE CORPS OF ENGINEERS

The last chapter in the history of the Clock Tower Building came close to never happening. The Rock Island District Corps of Engineers, whose chapter this really is, had come close to being a relic itself during the first part of the 20th century. The Rock Island District was established in 1866 to improve the shallow upper Mississippi River into a major inland waterway capable of handling the rapidly increasing river traffic following the Civil War.

The District did its job well during the remainder of the 19th century, improving the shallows by a series of wing dams that stretched from St. Paul to St. Louis, and making the two great rapids on the upper river navigable by dredging and blasting, and by locks and canals. By 1900, the District had assembled a fleet to do this work that rivaled all of the commercial boat companies on the river.

By the first decade of the 20th century, however, river traffic seemed to be dying. The great forests of Minnesota and Wisconsin had disappeared, and along with them, the sawmills and the raftboats. Railroads and highways had absorbed most towboat traffic. Further deepening of the Upper Mississippi to make river traffic competitive again seemed too expensive. By 1915, the Rock Island District was dwindling.

Then came World War I, dramatically demonstrating the need for a strong system of inland waterways, especially to move the bulk supplies needed by the Nation's industries. Congress responded by increased river appropriations during the 1920's. Spurred on by commercial barge interests, discussions began for a 9-foot channel from St. Louis to St. Paul. This project became a reality in 1930.

As the Rock Island District geared up the following year for what would be by far their largest project, they rapidly outgrew their comfortable quarters in the second and third floors of the Federal Building in Rock Island, above the Post Office on the first floor. One sub-office moved to the Liberty Building, another to the Safety Building, in Rock Island. Eventually, several offices had to be quartered in local hotel rooms.

The first solution to the space problem came in December of 1931, following two months of discussions on alternate proposals, including the

possibility of a new federal building. Using a law which permitted the Treasury Department to authorize extensions to existing federal buildings, up to a limit of $25,000, the Joint Interdepartmental Committee on Public Buildings in Washington announced that a 2,600 square foot, two-story addition would be made to the Rock Island Federal Building.[84] The Corps of Engineers was given until July 1, 1932, to decide if this would meet their needs and to contract for the job.

The Rock Island Federal Building was a U-shaped structure. One plan for the extension called for filling in this U from the first to the third stories, and then adding the authorized two stories on top of this.

While this plan may have met the space needs of the District, as much as two years would have elapsed before such an addition was finished. This was time the District did not have. Not only was the Rock Island District responsible for a number of locks and dams in the project, but the first of these, Locks No. 15, was already under construction just a few hundred feet from the Clock Tower Building. Dam 15 was in the planning stage. The Federal Building was stretching at the seams with rapidly expanding contract, land and real estate sections as well as with a growing engineer force.

In order to alleviate overcrowding at the Federal Building and in order to be close to the construction site of Locks and Dam 15, the Corps of Engineers obtained the right of temporary occupancy of the Clock Tower Building early in 1931. Using money from the appropriation for "Maintenance and Improvement of Existing River and Harbor Works, Mississippi River between the Illinois River and Minneapolis," the Rock Island District built temporary partitions at the east end of the first floor for an office, a drafting room, two instrument and miscellaneous storage rooms, and a lavatory. A concrete laboratory and an office were built along the west end of the first floor. On April 12, 1931, the field office personnel for Locks 15 inspection force moved into these quarters.[85]

For the next two years the movement of the Rock Island District into the Clock Tower Building was gradual, and was regarded as temporary. In August of 1931 a photo lab was built along the northwest corner of the first floor. Four offices, a drafting room, and two lavatories were built on the second floor. These latter offices were built for the field inspection force for the Dam 15-Davenport Interceptor Sewer and Seawall project. They moved into these quarters on January 2, 1932.

The original Clock Tower Building had no provisions for either heat or water. In September of 1931, realizing that winter was coming on, the District let out bids on a heating plant, and contracted with the Ryan Plumbing and Heating Company of Davenport for an oil burning steam heating plant large enough to heat only the offices already built and to provide hot water for the Photo Lab.

Installation of the heating plant and hot water heater began in September and was completed by November 7, 1931. A smokestack for the heating system was installed outside the building a few feet from the east corner of the portico. The stack extended ten feet above the roof line. In connection with this heating system, and also to supply the needs of Locks and Dam 15, an oil supply tank and a pipe line to the Arsenal siding were installed to transfer oil from tank cars.

When the field inspection force for Dam 15 moved into its second floor offices in January of 1932, the third floor became a storage area for Locks and Dam 15 and Lock 20 operating machinery patterns, and for cores from test hole borings for lock and dam sites in the District.

For a brief time, the third floor also had a more interesting use. With its open area free of columns, its high ceiling and wood floor, it became an ideal court for the District basketball team. John Sullivan, a retired District employee and then a member of the Drafting Section, reports that in 1932 the Deputy District Engineer, Captain Silkman, provided funds to sand the floors, protect the windows, and install basketball hoops. Here, until some time in 1933, the District team played and practiced as a member of the Davenport YMCA Basketball League. The court was located in the southwest corner of the third floor where the Survey Section is now located.

Expansion into the basement area of the Clock Tower Building began in October of 1932, when a concrete test cylinder storage room was built for the Concrete Laboratory in the southwest corner. Curing boxes were stored here to maintain a constant temperature for test specimens during cold weather.

During 1933 the second floor of the Clock Tower Building (with the exception of the four offices built along the northeast wall) became one large drafting room for 200 District draftsmen.[86] This lasted until September, when the greatly expanded Planning Section moved from its inadequate rented offices in the Safety Building in Rock Island to the second floor. The Planning Section finally used all of the second floor, displacing the Drafting Section to the east end of the first floor.

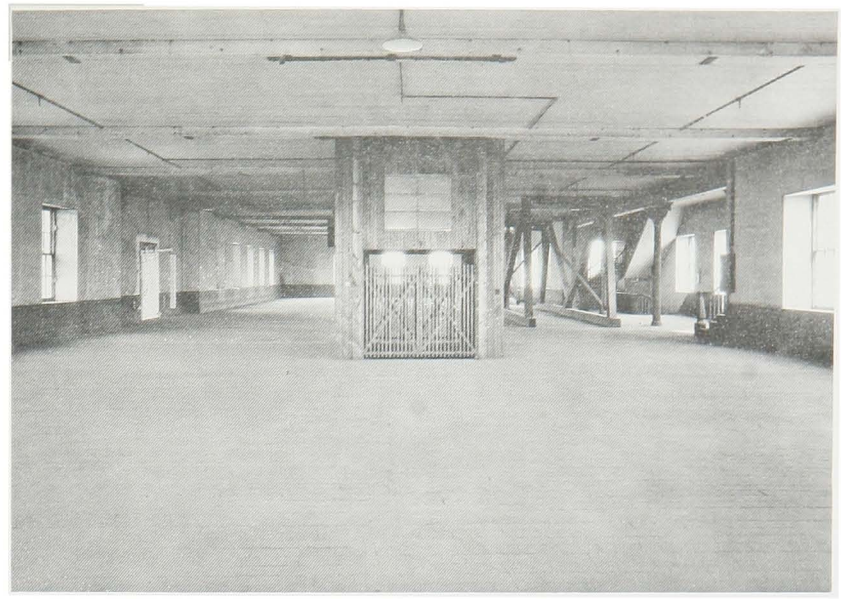


Fig. 19. Original white oak flooring on the third floor of the Clock Tower Building, prior to resurfacing.

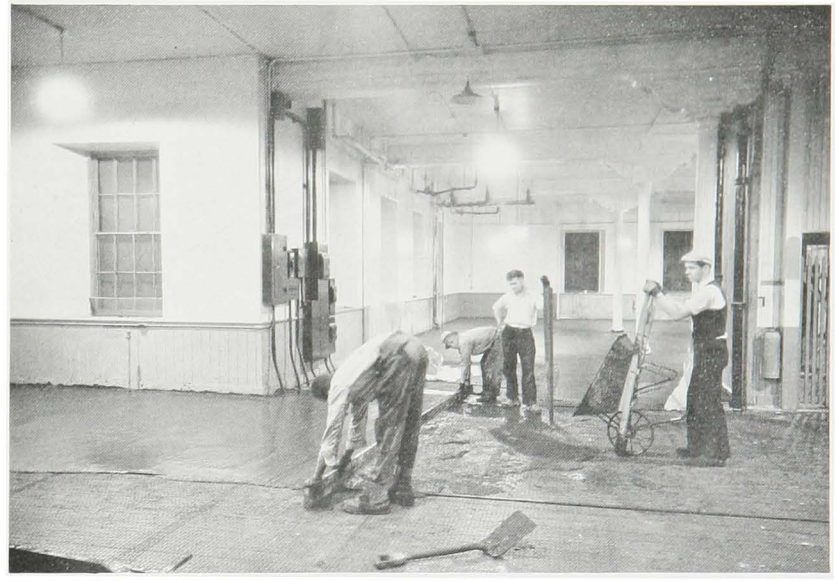


Fig. 20. Plastic mortar being placed between wooden screeds during resurfacing of the third floor in 1935.

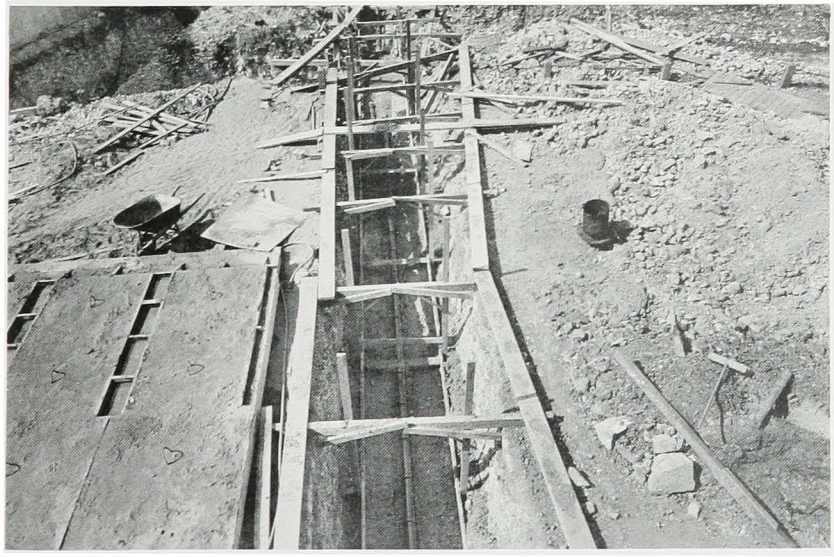


Fig. 21. The Motor Shop and Depot under construction, April 15, 1942.

In October 1933 a concrete materials room was built on the first floor adjacent to the concrete and Photo Lab rooms, and store rooms were built along the north wall of the basement. To handle the increased heating needs, especially of the Planning Section on the second floor, the boiler of the heating plant was expanded.

To counter the increased fire hazard brought about by the increased building population, steel fire escape ladders were installed outside the east and west ends of the building from the second floor to the ground. Inside, fire hoses and fire extinguishers were added, and 40,000 creosoted wood paving blocks which had been stored in the basement were removed to the Arsenal.

At some point during late 1933 or early 1934, a decision was made to gradually transfer the District Office itself, not just the overflow, from the Federal Building to the Clock Tower. That decision had to be made one way or the other because, as the building stood, it would serve as no more than temporary quarters, even for the overflow. The plumbing was not adequate, the heating plant had reached its capacity, floors and window sills and sashes were in bad shape. Roof and truss timbers had weakened to the point where the attic floor was supported by temporary wooden props throughout the third story. Access to the floors was limited, while outside, parking was rapidly becoming a major problem.

Once the decision had been made to move the Rock Island District to the Clock Tower Building, renovation began in earnest. 1934, then, became the year of the big move. During most of 1934 the regular work of the District was constantly interrupted by moving, by changed plans, and by the sounds of remodeling. As much of the work as possible was done during the second and third shifts to avoid bothering District employees, or was done with three shifts around the clock to hurry the work.

The City of Rock Island, as might be expected, was not happy over the proposed move. The Rock Island District Office had been located in Rock Island, in three different buildings, since 1872. On October 18, 1934, several members of the Rock Island Chamber of Commerce took the opportunity of a visit to the new Locks and Dam 15 by Secretary of War George Dern to plead the case for keeping the District Office in the city, and also to support the proposed construction of an armory along the Rock Island riverfront.[87] But by then it was too late.

On February 6, 1934, the Hydraulics Section moved from the Federal Building to new offices on the northeast corner of the first floor. Two other major renovations were begun and completed during February and March: a larger freight elevator and a fireproof vault for valuable papers.

Sometime prior to 1930 the Arsenal had installed an open freight elevator in the west shaft where a hoist had been. This elevator was operated by a 500 volt direct current motor and obtained its power from the nearby electric street car lines. This underpowered elevator was replaced by the Arsenal Maintenance Department using reconditioned machinery and a 220 volt, 9 horsepower a.c. motor, at a cost of $864. The elevator consisted of a platform without a cage. Its capacity was 3,000 pounds and its speed was sixty feet per minute.

Reconstructing the second and third floors of the tower into a file room and vault was the most ambitious of all the renovations. On February 21, the District contracted with A. J. Evans of Davenport for this job at a cost of $5,355. The project involved removing entirely the existing second and third story wooden floors, and all joists, beams, and trusses; and replacing the second and third floor levels, together with an intermediate floor between these two with reinforced concrete floor slabs designed to hold 250 pounds per square foot. In addition, all windows, frames, and doors on the second floor of the tower were removed, together with all wainscotting on the second and third floors, and all wooden stairways from the ground level to the third floor. The wood was replaced by steel stairways, steel sash, fireproof doors and frames. Heating and electric lights were added. To make the rest of the tower more fire resistant, the ceiling of the clock room was plastered. The project was completed, and accepted by the District, on April 5, 1934.

As spring weather arrived in March, attention turned to the parking situation. The District, using hired labor, expanded, graded, leveled, and surfaced the parking area around the Clock Tower Building as well as the roadways leading to the building. Concrete posts lined the edges of the parking area, which provided space for 122 cars.

The parking space quickly proved too small. In November the parking area was expanded, and a baseball diamond and a number of horseshoe courts were built west of the building for use by District employees. Tennis and volleyball courts and a basketball court were planned near where the motor shop now is, but were never built. Employees themselves built a rifle range and a practice driving range for golf in the attic of the building.

During the summer of 1934 electric fans were installed in the offices and drafting rooms to aid air circulation. On July 1 the Northern Field Area moved from offices in the Liberty Building

in Rock Island to temporary rooms adjacent to the main entrance on the south side of the Clock Tower Building. By November they had moved to permanent quarters in the Federal Building.

In spite of the fact that the Clock Tower Building was now crowded with an assortment of offices, resurfacing of the old oak floors could not be put off. Many of the boards were loose, many of them had cracked and splintered, many were uneven due to sagging joists. They were difficult to keep clean and sanitary, and required frequent mopping.

On November 4, 1934, David E. Kennedy, Inc., of Chicago was awarded a contract for flooring the three main floors with asphalt tile at a cost of $7,950. Work was to begin on the third floor and then proceed to the crowded first and second floors.

Before work could begin on the third floor, however, several of the roof trusses had to be reinforced with steel plate and rods so that the timber bracing holding up the attic roof could be removed from the third floor. This work was done during October.

Laying the floor covering was a several-step job. The old floor (See Fig. 19) of 1″ by 5″ oak boards had to be leveled, the cracks filled and patched with tin sheet, and loose boards nailed down. Over the whole surface a light woven wire mesh was laid down and nailed, then sealed to the boards with a sprayed coat of asphalt cement. On this, screeds of 1″ by ⅜″ wood were set level at ten to fifteen feet apart. A plastic mortar was then filled in between the screeds and leveled. (See Fig. 20.) After this base had cured for 4 days, a coat of asphalt cement was applied by trowel, and the 9″ square tiles laid in a checkerboard pattern.

After the third floor was laid, the Photo Lab moved to its new quarters there, and the Design and Drafting Sections moved to temporary quarters on the third floor. This move cleared the west end of the second floor so that flooring could begin there. When the west end had been floored, all offices at the east end of the second floor moved onto the new flooring, allowing the rest of the second floor to be completed.

When the second floor was finished, the Design and Drafting Sections moved back down from third floor into permanent quarters. The second floor permanent partitions were built only after all the office furniture and fixtures had been placed in their approximate final position.

The first floor was covered in much the same way as the second floor had been. The men employed on the floor covering worked from 4:30 p.m. to 8:30 a.m. to keep out of the way of the 180 District employees who occupied the building. A total of 29,835 square feet of floor covering was laid in 30 working days. The work was completed and accepted on December 14, 1934.

Two other renovations during the fall and early winter of 1934 were a passenger elevator and a new steam heating plant. On November 25, the District awarded a contract of $5,408 to Montgomery Elevator for a modern elevator to replace the freight elevator in the west shaft. The new elevator was enclosed in a structural steel frame running from bedrock through the fourth floor. Operating machinery was located on the fourth floor. The elevator had a capacity of 3,000 pounds and moved at a rate of 200 feet per minute. The work was completed on December 28, 1934.

Work on a new enlarged heating plant began on November 14, three hours after bids had been opened. The contract, for $7,317, was awarded to Ryan Plumbing and Heating of Davenport. An additional heating plant was installed, a new smoke stack replaced the old one, and radiators were added to the offices on the third floor. The work was completed on January 2, 1935.

Between October and December 31, many smaller renovation projects were also done. Additional electric wiring was installed, and all sashes, wood parts, and wainscotting were painted.

The official move of the District to its new headquarters began in late November of 1934. After the third floor had been tiled, partitions and offices were built. On November 30, the Lands, Maps, Contract, and Purchase Sections moved to these new quarters from the Federal Building. Major R. A. Wheeler, District Engineer at the time, estimated that the move would be complete in a week.[89]

December 10, 1934, became the official date of the transfer of the Rock Island District from the Federal Building to the Clock Tower Building when Major Wheeler moved into his office on the first floor, southeast corner. When he entered his office, Major Wheeler "found his desk adorned with a huge basket of flowers and a pretentious desk set — both being gifts from the engineer employees. The set included a desk blotter, electric clock, lamp, and letter opener."[90] One of his first callers was Colonel A. G. Gillespie, Commandant of Rock Island Arsenal. Major Wheeler took him on a tour of the newly-remodeled building.

The permanent heating plant had not been completed yet, and with the temperature outside at 10 degrees above zero (together with the frequent door opening caused by the moving), not all offices were yet comfortable. A bank of electric fans had been installed on the third floor to help circulate the heat.[91]

With a good communications system not yet established, several District employees hired as

messengers were busy running between offices on different floors, and between the Clock Tower Building and the few remaining offices in the Federal Building.

In the December issue of *Safe Channel*, the Rock Island District magazine, the headline of the employee news section changed for the first time from "Federal Building Notes" to "Clock Tower Tick Tocks."[92] By the end of December the entire District had left the Federal Building except for the Northern Field Area Office, the Illinois and Mississippi Canal Office, and the Property Section. These remained in the Federal Building until some time in 1936.

The only other major change to the Clock Tower Building after 1934 was the installation of fire escapes at each end of the building. Work on these was done in February 1935.

After the move was complete and the various offices had settled down, the first floor contained the offices of the District Engineer and his military assistants, who, in 1934, numbered 12. Other offices on the first floor were for the Senior Engineer, General Engineering Division, Chief Administrative Assistant, Fiscal Advisor, Safety, Finance, Correspondence, Personnel, Filing, Permits and Reports, Military and Cost Sections.[93]

On the second floor were Planning, Construction, Electrical, Land, Specifications, Drafting, and Design Sections. A conference room was also located on the second floor.

The Photo Lab, Maps, Hydraulics, Contract, and Purchasing Sections were on the third floor, while in the basement were storage rooms for the various sections on the other three floors, the Concrete Laboratory, and the mimeograph room.

The Clock Tower Building had more advantages than space. On the morning of March 15, 1935, District employees were given a recess from work to watch a large ice flow go through the rollers of Dam 15, a relatively new experience for Quad City residents.[94]

On September 11, 1941, the Ordnance Department permanently transferred ownership of the Clock Tower Building together with a surrounding triangle of 6.90 acres of land from the Rock Island Arsenal to the Corps of Engineers. With this transfer, the Rock Island District joined a select company of only two other Engineer Districts who own their own buildings.

This ownership is signified by the castellated towers of the Corps' official insignia, in the form of two 5″ by 8″ bronze (gun metal) plates attached to the south doors of the Clock Tower Building, and by a bronze plaque on the south wall identifying the building as the District Engineer's Office. These were cast at the Rock Island Arsenal in 1935.

As the Engineers settled into the Clock Tower Building and grew in complexity, many alterations have been made. In 1941, in response to the growing District motor fleet and its need for service, a motor shop and engineer depot was built just west of the Clock Tower Building. (See Fig. 21.) Parts of this building eventually became a paint laboratory, offices, and more recently, a conference room.

Although the outside of the Clock Tower Building itself has changed little since 1935, the three floors and basement inside have undergone periodic remodeling, both to update facilities and to squeeze ever more office and storage space out of corners here and there. A lunch room and many offices were added in the basement helping make room for the more than 280 employees who presently work in the building.

The need for increased ventilation showed up almost immediately after the District Offices were moved to the building in 1935. To move the air through the building, small portable fans were placed on each desk, but they were not adequate. The problem was especially severe in the large east room on the second floor which housed all of the draftsmen. The opening and closing of windows became a matter of contention.

In 1938 a test exhaust fan was installed in a second floor window and was run continuously. The fan worked so well that four permanent window fans were installed on second floor in hopes of moving air throughout the building.

These exhaust fans, supplemented by the remaining portable desk fans, provided the entire summer ventilation system until 1966, when a contract with Moline Heating and Construction Company brought air conditioning, as well as a new heating and ventilating system.

In 1949 a sprinkler system was installed in the Clock Tower Building and the Motor Shop to increase fire safety. In 1960 the Montgomery Elevator Company modernized the passenger elevator by switching from alternating current to direct current, and by installing an automatic elevator car in the old frame.

Perhaps in no area has change been as visible as in communications. Beginning with a World War II AM radio system in the early 1940's, used only to communicate with the District dredge, District radio expanded in the early 1950's to AM radio connection with its locks and dams. In February, 1965, just prior to the record flood of that year, the Clock Tower switched to shortwave, installed in a radio room on the third floor. District radio can now reach employees throughout the District in car, boat, or lock.

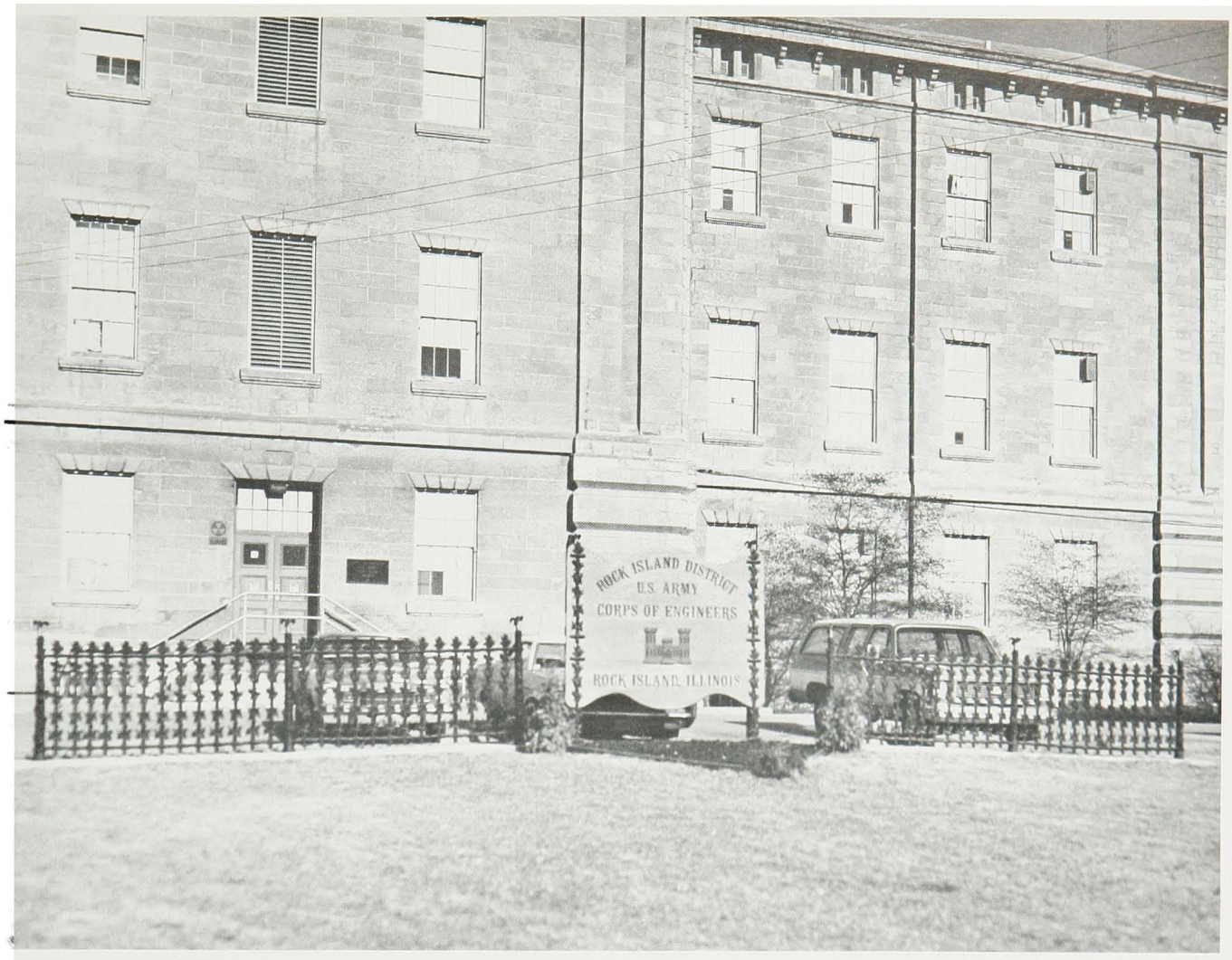


Fig. 22 Above. View of oak leaf design fence with American Eagles on top. This fence was built from Civil War cannonballs in 1870.

The old Photo Lab and Mimeograph Room would hardly recognize their modern, up-to-date counterparts. Equipment in both departments have been regularly updated. Xerox equipment, beginning with a modest installation in 1963, has revolutionized the duplicating process. New equipment in the Photo Lab has made possible color work since 1967.

The newest result of the information explosion is the District Library on the second floor. Begun in May of 1975, the library has brought together and completed scattered collections from a number of offices.

In the past three years, extensive redecorating has brightened the appearance of most of the offices and corridors. New paneling covers old partitions; new tile covers the old flooring; and extensive painting has not only freshened hallways and offices, but has hidden the exposed pipes, ducts, and girders under the high ceilings.

Outside the Clock Tower Building, the only visible change is an iron fence along Rodman Avenue. Two sections of this same fence, together with a historical marker, stand just south of the building. The fence is of oak leaf design, with American eagles atop each post. It was made in the 1870's of Civil War era cannonballs and originally stood in the Rock Island Arsenal National Cemetery. In 1975 the above sections were placed in their present locations to commemorate the 200th anniversary of the founding of the Corps of Engineers. (See Fig. 22)

The exterior of the Clock Tower Building itself remains much as it must have looked in 1868. The stone has not weathered nearly so much as Major Kingsbury anticipated and feared. The frustrations and criticism he encountered in its construction seem far away. In a way different from what he had expected, the Clock Tower Building has become one of the best-known symbols of the area to both rivermen and residents. And it is leading a fuller and more active life than he ever dreamed.

FOOTNOTES

1. Colonel D. M. King, *War's Greatest Workshop, Rock Island Arsenal* (Arsenal Publishing Company of the Tri-Cities, 1922), p. 77.
2. Benjamin F. Tillinghast, *Rock Island Arsenal: in Peace and War* (Chicago: Henry O. Shepard Co., 1898), p. 25.
3. Ibid., p. 27.
4. *An Appeal to Congress by the Citizens of Rock Island and Moline, Illinois, and Davenport, Iowa, in Favor of a National Armory on the Site of Fort Armstrong, on the Island of Rock Island, in the State of Illinois* (Rock Island, Ill.: Printed by Danforth and Jones at the Argus Book and Job Office, 1861), p 8.
5. Ira Nothstein, *A History of Rock Island Arsenal from Earliest Times to 1954* (Rock Island, Ill.: Rock Island Arsenal, 1965), p. 75.
6. Letter from Dimock, Gould, *et. al.*, to John Floyd, Secretary of War, November 7, 1857.
7. Newspaper clipping in "Rock Island Arsenal" (reservation file, Record Group 153, National Archives).
8. Nothstein, *History of Rock Island Arsenal*, p. 92.
9. Tillinghast, *Rock Island Arsenal*, p. 28.
10. *Rock Island Argus*, March 9, 1863, p. 3.
11. General Ripley, Letter to J. B. Danforth, *Argus*, May 1, 1863.
12. Ibid.
13. Nothstein, *History of Rock Island Arsenal*, p. 95.
14. Ibid.
15. Ibid., pp. 95-96.
16. *Argus*, July 25, 1863, p. 3. Throughout the following account, community response to Major Kingsbury and the Arsenal seem more negative than it was. The only existing source for many of the facts is the *Argus*, whose criticisms represent a personal rather than community bias.
17. Nothstein, *History of Rock Island Arsenal*, p. 96.
18. Wesley I. Shank, "United States Arsenal, Arsenal Building, Indianapolis," Historic American Building Survey, National Park Service, p. 1.
19. Major D. W. Flagler, *A History of the Rock Island Arsenal from Its Establishment in 1863 to December 1876* (Washington: Government Printing Office, 1877), p. 109.
20. Philippe Oszuscik, Interview, September 6, 1976.
21. *Argus*, August 14, 1863, p. 3.
22. *Argus*, August 10, 1863, p. 4.
23. *Argus*, August 15, 1863, p. 3.
24. Nothstein, *History of Rock Island Arsenal*, p. 125.
25. Ibid., p. 98.
26. General Ripley, Letter to Major Kingsbury, August 24, 1863, Letters sent, 1863, Ordnance Department (Record Group 153, National Archives).
27. Ibid.
28. *Argus*, September 3, 1863, p. 3.
29. *Ibid.*
30. *Argus*, September 5, 1863, p. 2.
31. *Argus*, October 22, 1863, p. 3.
32. General Dyer to General Rodman, Letter, July 10, 1867, Letters sent, Ordnance Department (Record Group 153, National Archives).
33. Ira Nothstein, "Rock Island and the Rock Island Arsenal," *Journal of the Illinois State Historical Society*, 33 (September 1940), 332.
34. Letter to Major Kingsbury from Ordnance Department, February 26, 1864, National Archives.
35. *Argus*, February 23, 1864, p. 3.
36. Letter to Kingsbury from Ordnance Department, February 26, 1864.
37. Major Kingsbury, Letter to Headquarters, March 2, 1864, Letters Received, Ordnance Department (Record Group 153, National Archives).
38. "Rock Island Arsenal, Storehouse A, under Major Kingsbury's Command — 1863-65," Mimeographed pamphlet.
39. General Dyer, Letter to Major Kingsbury, March 20, 1865, Letters Sent, Ordnance Department (Record Group 153, National Archives).
40. *Daily Davenport Democrat*, April 20, 1864.
41. *Argus*, March 27, 1867, p. 3.
42. *Rock Island Union*, April 27, 1864.
43. Ibid.
44. Major Kingsbury, Letter to General Ramsay, May 4, 1864, Letters Received, Ordnance Department (Record Group 153, National Archives).
45. General Ramsay, Letter to Major Kingsbury, April 15, 1864, Letters Sent, Ordnance Department (Record Group 153, National Archives).
46. General Ramsay, Letter to Major Kingsbury, May 25, 1864, Letters Sent, Ordnance Department (Record Group 153, National Archives).
47. Ibid.
48. Nothstein, *History of Rock Island* Arsenal, p. 121.
49. General Dyer, Letter to Major Kingsbury, March 9, 1865, Letters Sent, Ordnance Department (Record Group 153, National Archives).
50. Nothstein, *History of Rock Island Arsenal*, p. 129.
51. General Dyer, Letter to Major Kingsbury, March 7, 1865, Letters Sent, Ordnance Department (Record Group 153, National Archives).
52. Flagler, p. 111.
53. Ibid., p. 110.
54. *Argus*, July 31, 1865.
55. Nothstein, *History of Rock Island Arsenal*, p. 125.
56. Ibid.
57. Ibid.
58. Ibid., p. 126.
59. General Dyer, Letter to General Rodman, August 21, 1865, Letters Sent, Ordnance Department (Record Group 153, National Archives).
60. Nothstein, *History of Rock Island Arsenal*, p. 131.
61. General Dyer, Letter to General Rodman, October 21, 1865, Letters Sent, Ordnance Department (Record Group 153, National Archives).
62. *Argus*, October 10, 1865.
63. General Dyer, Letter to General Rodman, January 20, 1866, Letters Sent, Ordnance Department (Record Group 153, National Archives).
64. *Argus*, November 5, 1866, p. 2.
65. Ibid.
66. Ibid.
67. *Argus*, March 27, 1867, p. 2.
68. Ibid.
69. *Argus*, November 5, 1866, p. 2.
70. *Argus*, January 7, 1868, p. 3.
71. Colonel Flagler, Letter to Bailey Davenport, October 13, 1875, Letters sent, 1875-76, Ordnance Department.
72. *Argus*, January 7, 1868, p. 3.
73. Ibid.

74. *Chicago Daily News*, September 29, 1948.
75. Flagler, Letter to Bailey Davenport, p. 2.
76. Anna Parker, Letter to Roald Tweet, October 2, 1976.
77. *Argus*, January 7, 1868, p. 3.
78. Ibid.
79. Ibid.
80. Flagler, Letter to Bailey Davenport, p. 2.
81. Rock Island District mimeographed pamphlet.
82. King, p. 77.
83. "The Story of Technical High School," pamphlet (1916), p. 9.
84. *Argus*, December 9, 1931, p. 1.
85. War Department, Corps of Engineers, "Alteration of Clock Tower Building and Construction of the District Office Boathouse," typed copy (Rock Island, Ill.: U.S. Engineer Office, 1937). Unless otherwise specified, the information in the following pages is all from this account, which contains detailed specifications for all of the renovation work done from 1931 to 1936.
86. *Argus*, December 30, 1933.
87. *Argus*, October 19, 1933.
88. *Argus*, November 28, 1934.
89. *Argus*, November 30, 1934.
90. *Argus*, December 10, 1934.
91. Ibid.
92. *Safe Channel*, 1 (December 1934), p. 37.
93. *Argus*, December 31, 1934.
94. *Safe Channel*, 2 (April 1935).
95. War Department, "Alteration of Clock Tower Building," p. 53.

BIBLIOGRAPHY

Album of the Three Cities. Davenport, Iowa, Rock Island and Moline, Ill., and Rock Island Arsenal. Davenport, Iowa: Huebinger Bros., 1890.

An Appeal to Congress by the Citizens of Rock Island and Moline, Illinois, and Davenport, Iowa, in Favor of a National Armory on the Site of Fort Armstrong, on the Island of Rock Island, in the State of Illinois. Rock Island, Ill.: Printed by Danforth and Jones at the Argus Book and Job Office, 1861.

Arpy, James. "Strange Legends of the Clock Tower," Davenport *Times Democrat*, March 31, 1963.

Babcock, O. M. *Rock Island, her Present and Future.* Rock Island, Ill.: Argus Printing Establishment, 1872.

Daily Davenport Democrat. April 20, 1864.

Flagler, Major D. W. *A History of the Rock Island Arsenal from Its Establishment in 1863 to December 1876.* Washington: Government Printing Office, 1877.

_____.Letter to Bailey Davenport, Mayor of Rock Island, October 13, 1875. Letters Sent, 1875-76, Ordnance Department (Record Group 153, National Archives).

Johnson, Neil. "Historical Notes on Clock Tower Building," mimeographed pamphlet, May 28, 1962.

King, Colonel D. M. *War's Greatest Workshop, Rock Island Arsenal.* Arsenal Publishing Company of the Tri-Cities, 1922.

Letters, Telegrams, Reports Sent to Officers in the Field, 1862-1868. Ordnance Department (Record Group 153, National Archives).

Nothstein, Ira. *A History of Rock Island Arsenal from Earliest Times to 1954.* Vol. I, to 1898. Rock Island, Ill.: Rock Island Arsenal, 1965.

_____. "Rock Island and the Rock Island Arsenal," *Journal of the Illinois State Historical Society*, 3 (September 1940).

Oszuscik, Philippe. Interview about Architecture of the Clock Tower Building. September 6, 1976.

Parker, Anna. Letter Concerning the Indianapolis Arsenal Building and Its Bell. October 2, 1976.

Picturesque Tri-Cities. Davenport, Iowa, 1901-1903.

Register of Letters Received, 1862-1868, Ordnance Department. Record Group 153, National Archives.

Rock Island and Its Surroundings in 1853. Chicago: Democratic Steam Print, 1854.

Rock Island Argus. 1863-1868; 1930-1936.

Rock Island Arsenal, Past and Present. Rock Island, Ill.: Western View Co., n.d.

Rock Island Arsenal, Storehouse A, under Major Kingsbury's Command — 1863-65. Mimeographed pamphlet, Rock Island District Corps of Engineers.

Rock Island County Historical Society and the Davenport Academy of Science. *Official Book of the Fort Armstrong Centennial Celebration, 1916.* Rock Island, Ill.: Vaile, n.d.

Rock Island Union. April 27, 1864.

Shank, Wesley I. "United States Arsenal, Arsenal Building, Indianapolis," Historic American Building Survey, National Park Service.

A Short History of the Island of Rock Island 1816-1966, Including the Story of the Time Capsule. Rock Island Arsenal Pamphlet 800-1. Rock Island, 1967.

"The Story of Technical High School." 1916.

Tillinghast, Benjamin Franklin. *Rock Island Arsenal: in Peace and War.* Chicago: Henry O. Shepard Co., 1898.

_____.*Three Cities and Their Industrial Interests.* Davenport, Iowa: Glass and Hoover, 1884.

War Department, Corps of Engineers. "Alteration of Clock Tower Building and Construction of the District Office Boathouse." typed copy. Rock Island: U.S. Engineer Office, 1937.

☆ U. S. Government Printing Office: 1977-750-847

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