L. Bracketed Galleries

On October 15, 1900, an allotment of $825 was made by the Chief Engineer from the appropriation for "Gun and Mortar Batteries," act of May 25, 1900, for the construction of galleries connecting the gun platforms of Battery Jasper.[1] In November, Captain Sanford prepared and forwarded to Washington for approval plans and specifications for the galleries.

The Chief Engineer's approval secured, work on the galleries' ironwork was started and far advanced by the end of December. Some holes had been drilled for the brackets, but because of the granite blocks embedded in the concrete progress was slowed. Bids had also been invited for the materials needed. In January the six brackets for one of the galleries were positioned and concreted, while the holes had been partially drilled for another. By February 28 most of the ironwork for the remaining brackets had been machined, as well as some of the work on the turnbuckles for the bridges. The remaining brackets were seated in March, and the trussed rails of one bridge positioned. Most of the shopwork on the remaining bridges had been done, before work was suspended as the original allotment had been exhausted.[2]

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1. *Report of the Chief Engineer for Fiscal Year 1901*, I, 817; *MRO-Charleston*, 2, 53.

2. *MRO-Charleston*, 2, 79, 106, 133, 177, 209.

The Chief Engineer on learning that additional funds were needed to complete the Bracketed Galleries on March 23, 1901, allotted the project another $300 from the appropriation for "Gun and Mortar Batteries," act of March 1, 1901.[3] Work was resumed in April, and by the end of the month the remaining bridges had been installed and the floors of the galleries finished. By the end of the fiscal year, with the positioning of the handrails at the rear of the gun platforms and the painting of the metal parts, the galleries were completed.[4]

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3. *Report of the Chief Engineer for Fiscal Year 1901*, I, 818.

4. *MRO-Charleston*, 2, 256, 316, 347, 351.

M. Telephone Niches

Captain Howell in 1903 requested an allotment of $825 to construct recessed telephone booths in the battery. At present,there were temporary wooden shelters for the battery telephones attached to the wall. These telephones were used for fire control.[1] It was two years later , before the Chief Engineer was able to budget $825 for three telephone niches and one telephone booth.[2] The niches were to cost $75 each.

Plans for the niches and booth were approved in July, and work commenced cutting the niches.[3] In August 1905 this phase of the construction was completed, and the niches plastered. Iron doors for the niches were received and stored in October. By the end of 1905 Captain Howell was able to report the doors fitted, the niches and booth completed, and the allotment exhausted.[4] New locks were installed[5] on the niche doors in January 1906,[5] and in April an iron platform was erected at Niche No.1.[6]

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1. Howell to Harrison, June 22, 1903, *Ltrs. & Rpts. Sent, 1901-1903*, p. 187.

2. *MRO-Charleston, 4*, 220: *Ltrs. & Rpts. Sent, 1901-1903*, p. 387.

3. *MRO-Charleston, 4*, 314.

4. Ibid., pp. 350, 419, 453, 487.

5. Ibid., p. 504.

6. Ibid., p. 610.

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In October 1907 four blackboards were built and placed in the telephone niches. The doors to the niches and booth were repaired and painted at the same time.[7] Eighteen months later the battery commander complained that the door of one of the niches scraped the concrete floor. The niche in Emplacement No.4 was accordingly "cut and fitted with a wooden casing and iron door."[8]

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7. *MRO-Charleston*, 5, 144.

8. Ibid., p. 714.

N. Landscaping

In January 1906 oleanders were planted in front and to the rear of Battery Jasper.[1] The following month saw the horticulturists setting out silver maple sprouts among the oleanders planted between the battery and seawall.[2]

A fatigue party in October 1906 removed the sand hill which had been building up near the west end of the battery. The sand was placed around the west cistern, making the ground slope between the sidewalk and the main drain continuous. A sand fence in this area, which had fallen into disrepair, was righted.[3] November found a crew covering the sand slope thrown up in rear of Battery Jasper, the previous month, with mud "to hold the sand and encourage the growth of grass." A roadway in rear of Batteries Jasper and Logan was graded, while a shell and mud roadway was opened.from the west end of Battery Logan to Battery Jasper.[4]

The shrubbery around the battery was trimmed, and the sprouts transplanted in the intervening spaces.[5] With the coming of spring, 1907, the slopes in rear of the battery were planted with Bermuda grass roots. "Durable trees" were set out in the same area, where the oleanders were too scattered.[6]

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1. *MRO-Charleston, 4,* 504.
2. Ibid., p. 539
3. Ibid., p. 793.
4. Ibid., p. 822.
5. Ibid.
6. Ibid., p. 935.

O. Battery Commander's Station

The Charleston Engineer District in January 1914 prepared estimates for the construction of a temporary Battery Commander's Station for target practice, and for the alterations this would require to Emplacements Nos. 2 and 3. It was proposed to widen the loading platforms and erect the 2-story station in rear of the traverse between Emplacements 2 and 3. The upper story of the Battery Commander's Station would serve as an observation post and the lower as a plotting room. Cost of labor and materials would be $900.[1]

The approval of the Chief Engineer having been received, work on this project was commenced in February, with the enlargement of the platforms. By March 31 the station had been completed, except for the outside steps and boardwalk connecting the station with the gun platforms.[2] In April the Battery Commander's Station was completed and turned over to the Coast Artillery.[3]

In June 1915 the roof of the station was recovered with tarpaper,[4] and in October 1917 windows were cut in the plotting room.[5]

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1. *MRO-Charleston, 7,* 925, 926.
2. Ibid., p. 990; *MRO-Charleston, 8,* 2.
3. *MRO-Charleston, 8,* 40.
4. Ibid., p. 686.
5. *MRO-Charleston, 9,* 713.

P. Latrine

The Chief Engineer allotted $800 for the construction of a latrine in Fiscal Year 1916. Work was begun in September 1915, and by the 18th the concrete foundation had been completed, the underfloor planking positioned, and about 500 feet of six-inch sewer pipe laid. (Plans of the Battery Jasper Latrine accompany this report.) Water connections were made with the Battery Jasper main. Doors, windows, and frames had been nailed together by the carpenters and stored.[1] In October the latrine, except the interior plumbing and painting, was finished. The plumbing and painting would be done by post labor.[2] The post plumber made the necessary connections in November, but it was February 1916 before the painters were called in.[3] During January 1917 a concrete manhole was constructed in the sewer pipe line of the latrine.[4]

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1. *MRO-Charleston, 8,* 806.
2. Ibid., p. 863.
3. *MRO-Charleston, 9,* 70.
4. Ibid., p. 433.

Q. General Maintenance

Battery Jasper by May 31, 1898, had been completed and was ready to be turned over to the artillery, although a few minor details needed attention.[1] In June the mouthpieces for the speaking tubes were received and installed, while minor repairs were made to the ammunition hoists.[2] The ammunition hoists continued to give trouble, and additional adjustments were made to them in July and August.[3] In February 1899, the ammunition hoist for Gun No.1 was dismantled and repaired.[4]

At the beginning of 1899, on the request of the battery commander, two ladders were put up leading from the platforms to the superior slope of the parapet. Some difficulty having been experienced with the drains, preparations were made for the repair of their outlets. During February and March, workmen in the employ of the District took up and relaid the drain tile betweeen the two outer sumps. While a carpenter rebuilt one of the sumps, a box drain, 50 feet long with moveable top, was put down beyond the last sump. The box drain was held in place by square piles "pumped & driven into the sand to a depth of

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1. Ruffner to Wilson, June 25, 1898, found in *MRO-Charleston, 1*,215.
2. Ruffner to Wilson, July 1898, found in ibid., pp. 245, 274.
3. *MRO-Charleston, 1*, 304, 334.
4. Ibid., p. 508.

ten feet."[5] In April, 140 tons of rock were placed around the two most exposed sumps.[6]

The painters in April painted the I-beams.[7] Torrential rains in the late summer of 1899 proved an embarrassment to the Corps of Engineers, as the drains and gutters were unable to handle the run-off, and water ran into the battery under the doors. In the first months of 1900, to cope with this situation, the drainage holes that had been drilled through the concrete at the bottom of the lift-wells were filled with cement mortar; hoods of yellow metal were flashed in over the doors of the ammunition hoists and the entrance to the dynamo room; and grooves were cut over the outside doors of the battery.[8]

In August 1900 a crew was turned to leveling and grouting with Portland Cement the base rings in Emplacements Nos.1, 3, and 4, and repairing the ammunition hoists.[9] The hoists continued to give trouble, and in October the bumpers were repaired, while some broken wire rope was replaced by new.[10] Satisfied that the hoists would never function

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5. Ibid., pp. 463, 508, 535.

6. Ibid., p. 569.

7. Ibid.

8. Ibid., pp. 801, 827, 899; *Annual Reports of the War Department for the Fiscal Year Ended June 30, 1900. Report of the Chief of Engineers* (Washington, 1900), I, 912. In March several broken brackets were replaced.

10. *MRO-Charleston*, 2, 45, 72.

properly unless there were major alterations, Captain Sanford in December asked the Chief Engineer for permission to solicit proposals for "cast steel bracket hangers" for the "shot- and ammunition-lifts."[11]

Repairs were made in March 1901 to the drain, while the exhaust pipe of the oil engine was lengthened.[12] The painters during the spring painted the doors, stairways, ammunition hoists, and ironwork.

Battery Commander Curtis, when he inspected the emplacements, was distressed to see the sloppy manner in which "the iron beams, doors, lift guides, hand rails, and trolleys had been painted." The painters had smeared black paint over the floors, walls, ceilings, and platforms.[13]

Concrete steps were added where needed--in the entrances to the solid shotrooms--while gutters for the drainage of the gun platforms were cut.[14] In October 1901 the inner walls of the battery were given a coat of "white water" paint to provide better lighting.[15] December found a crew working on the drains. Several small drains were cut, and the

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11. Ibid., pp. 98, 128.

12. Ibid., p. 213.

13. Ibid., pp. 261, 319, 393; Curtis to Adjutant General, May 31, 1901, *Ltrs. and Rpts. Sent, 1901-1903*, p. 55.

14. *MRO-Charleston, 2*, 261, 319.

15. Ibid., p. 519.

left hole in the drain covers was plugged." The drains on the superior slope of the battery were repaired with Portland cement.[16] In June and July 1902 Captain Sanford had a crew clean out the lower end of the drain, where they discovered and replaced a broken pipe. A load of rock was placed around the new pipe to protect and secure it.[17] Before the end of Fiscal Year 1902, several other maintenance projects were undertaken: (a) new mouthpieces for the speaking tubes were placed where needed; (b) the ammunition hoists were painted; (c) the oil engine was repaired; and (d) the gun platform rails were painted.[18]

On July 27, 1902, Captain Sanford requested that the Charleston Engineer District be allotted for Battery Jasper in Fiscal Year 1903: (a) $566.40 to replace with gutters cut in the concrete "the present gutters which rest in an earth cover." (the subject gutters being useless whenever the big 10-inch rifles were fired); (b) $1,800 for the construction of a new outlet drain to the backbeach with six manholes; and (c) $588 to build an outlet drain from Battery Logan into the Battery Jasper drain.[19] The Chief Engineer was agreeable, and the

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16. Ibid., p. 608.

17. Ibid., pp. 939, 969.

18. Ibid., pp. 488, 706.

19. Sanford to Gillespie, July 27, 1902, *Ltrs. & Rpts. Sent, 1901-1903.*

necessary funds were made available. By June 30, 1903, the drains and gutters had been constructed.[20]

In June the artillerists were turned to removing sand that had drifted against the doors at the west end of the battery. To prevent a recurrence a sand fence was erected in this area.[21] Two months later, the sump at the west end of the battery was raised to keep out the drifting sand.[22] In January 1904 the Charleston Engineer District was called on to repair broken steps at Emplacement No.2 and to repair the gutters on the superior slope.[23]

The Chief of Engineers in July 1904 made several allotments for projects at Battery Jasper. Among these were: (a) $350 for waterproofing the loading platforms; (b) $175 for hand-railings; and (c) $205 for painting the exposed concrete surfaces.[24] Several weeks later, Captain Howell of the Charleston District was notified by the Chief Engineer that under the appropriation act of March 3, 1903, $1,200 had been budgeted for a concrete walk at Battery Jasper.[25]

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20. *MRO-Charleston, 3,* 49. About 60 feet of the west end of the Battery Jasper drain were covered with concrete and two small sumps installed.

21. Ibid., p. 197.

22. Ibid., p. 332.

23. Ibid., p. 583.

24. Ibid., p. 856.

25. Ibid., p. 865.

In July a crew was hired and turned to making preparations to put in the walkway--the materials (gravel and sand) were received and stored, while some cutting out was done in rear of the battery. By September 30 the cutting out and excavating for the walkway had been completed, and 385 linear feet of concrete laid. Where necessary, several doors were cut off, and steps built. In October and November the slopes were graded, sodded and planted with grass, thus finishing the project and exhausting the allotment.[26]

The painters in December 1904 began applying oil and paint to the concrete walls of Battery Jasper, and by the end of January the task was declared completed.[27] In April the magazines, ceilings, and passages were painted.[28] With the beginning of a new fiscal year, the painters were again turned to. In August 1905 they painted the canopies and observation tower.[29]

Meanwhile, the Corps of Engineers--utilizing the $350 allotted for waterproofing the loading platforms and $175 for hand railings--took up and relaid the floor of No.2 armament room, and cleaned the vertical walls above the loading platforms. December found a crew applying two

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26. Ibid., pp. 893, 941, 965; *MRO-Charleston, 4,* 3.

27. *MRO-Charleston, 4,* 66, 182. As the scarp wall was conspicuous from the seaward, it and the superior slope were tinted.

28. Ibid., p. 205.

29. Ibid., pp. 283, 385.

coats of Epure Asphalt to loading platforms Nos.1 and 2. Before the asphalt could be applied to the other two loading platforms, the weather turned cold and the work was suspended until March. Implement racks were finished and positioned on the hand railings in rear of the four 10-inch rifles; hand rails were made and placed near the head of the steps at each loading platform; and cracks in the division planes of the loading platforms were cut out and filled with elastic cement.[30]

In Fiscal Year 1906 a number of maintenance oriented projects were taken up. In July new shellroom doors were installed and V-drains were cut into the platforms to carry off water left standing after a rain.[31] The next month, the recess doors were repaired.[32] September found the plumbers piping water into the four emplacements.[33] In January the drainage system was flushed and cleaned, while two sets of rammer hooks were shaped and three concrete posts for instrument piers moulded.[34] A flagstaff was erected in March.[35]

Calls for funds for maintenance were held to a minimum in the Fiscal Year ending June 30, 1907. In October the sand fence at the west end of the battery was rebuilt, and the interior iron steps in Emplacement No.2 painted.[36] To get rid of the water which stood after a rain, drains were cut in the concrete walls above the doorways.[37]

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30. Ibid., pp. 3, 10, 66, 102, 136, 171.
31. Ibid., p. 317.
32. Ibid., pp. 353.
33. Ibid., p. 390.
34. Ibid., p. 540.
35. Ibid., p. 576
36. Ibid., p. 793
37. Ibid., p. 822.

The next month found the maintenance people shaping and installing new covers for the drain pipes in rear of the battery. Guard rails were placed around the small platforms at the battery's main entrance.[38]

In August 1907 a man was detailed to repair a broken hand rail, and to replace several broken drain covers. The next month, a plumber was called in to fix a leaking hydrant.[39] April 1908 found a crew cutting out and replastering cracks in the battery walls.[40]

Workmen in September and October 1908 cut niches for ordnance terminal boxes in the battery.[41] In December, at the request of the battery commander, the wooden booths were removed from the parapet.[42] The command post behind the battery was repaired in February 1909, while two new range boards were placed in two of the emplacements.[43] In June hooks and range boards were placed in Emplacements Nos. 3 and 4, while the hand railings in Nos.2 and 3 were repaired.[44] The plumbers in March 1910 were called in to stop a leak in a hydrant and the electricians to position 12 reflectors on the gun platforms.[45] In January 1911 the four sets of iron steps leading from the platforms to the galleries were replaced by concrete steps, while the three sets of iron steps (on the outside) were reinforced--where rusted through--by

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38. Ibid., pp.793, 850.

39. *MRO-Charleston, 5,* 91, 118.

40. Ibid., p. 318.

41. Ibid., pp. 492, 503.

42. Ibid., p. 573.

43. Ibid., p. 644.

44. Ibid., p. 786.

45. *MRO-Charleston, 6,* 214.

concrete.[46] A core-drilling plant was moved into position on May 8, and by the end of the month ventilating shafts had been drilled into three of the shellrooms, while the one into the fourth was one-half completed. The concrete cutting necessary to connect these shafts with the interiors of the shellroom was about 50 percent finished. This project was completed before the end of Fiscal Year 1911.[47]

In February 1912 the magazine doors were repaired and 16 grating doors hung.[48] Two months later, Yale & Towne locks were rivetted on all the grated doors and shutters.[49]

Very little maintenance was required in the period 1912-1913. In December 1912 the drain covers were repaired. February of 1913 found the painters coating the inferior slope of the battery with a wash of lampblack and Portland cement. The back wall and roof of the powerhouse were painted in March and April, and in September the entire structure was given a coat of paint.[50]

In July 1914 the Charleston District was called on to see that repairs were made to the delivery tables, truck recesses, and the telephone niches at the battery.[51]

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46. Ibid., p. 579.
47. Ibid., p. 711.
48. Ibid., p. 940.
49. *MRO-Charleston, 7,* 76.
50. Ibid., pp. 323, 460, 509, 564, 804.
51. *MRO-Charleston, 8,* 158.

March 1915 saw a crew removing the interior iron steps at Emplacement No.4 and replacing them with reinforced concrete steps. Fourteen speaking tube mouthpieces were installed to replace ones that had disappeared.[52] In May two new locks were requisitioned and fitted to the doors of the powerhouse, while a range finder was installed in the secondary station.[53]

In October 1917 two loading platforms were extended with wood.[54]

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52. Ibid., p. 462.

53. Ibid., p. 561.

54. *MRO-Charleston, 9,* 713.

APPENDIX A

Abstract of Proposals for Furnishing Material and Constructing Three Emplacements for 10-Inch Rifle Battery

Material & Construction	[A. M. Manigault [& R. Holmes [	John L. Grim	George W. Egan	Jacob Friday & Sons	Earle Sloane & Hasell Crouch	Stewart Construc-tion	Gude & Walker
Large stone/short ton.	$2.30	$2.90	$2.50	$2.50	$5.50	$3.05	$2.35
Broken stone/short ton.	2.25	2.80	9.95	2.50	5.35	3.30	2.45
Pon Pon gravel/cu.yd.	.75	.90	1.13	1.35	1.20	1.06	1.10
Sand-hill sand in bins /cu.yd.	.25	.30	.35	.35	.25	.40	.30
American Portland Cement/barrel.	3.25	2.40	2.60	2.35	2.70	2.66	3.00
American natural cement /barrel.	1.55	1.15	1.24	1.05	1.25	1.18	1.35
32 Anchor bolts/the lot	200.00	750.00	225.00	150.00	180.00	270.00	300.00
Steel I-beams,/long ton.	37.10	67.20	55.00	52.00	44.80	58.00	60.00
Corrugated iron/100 lbs.	3.33	4.50	5.00	3.50	3.00	4.68	4.00
Cast iron drain cover /linear foot.	.68	.75	.80	.75	.75	.85	.80
Iron stairways, 3 ft. wide per step.	10.70	8.25	12.00	10.35	10.35	14.79	11.00

APPENDIX A cont.

Iron Stairways, 4 ft. wide per step.	13.40	8.50	13.50	12.15	12.00	17.30	12.00
Iron Stairways, 4.5 ft. wide per step.	14.70	9.00	14.00	13.05	12.25	18.75	13.00
Iron Stairways, 6 ft. wide per step.	1.00	12.50	18.00	15.15	18.60	29.19	15.00
Iron Ladders,/linear ft.	1.00	1.25	1.25	1.25	1.10	.82	1.00
Small doors & hinges per doorway.	25.00	50.00	40.50	55.00	30.75	55.00	75.00
Large doors & hinges per doorway.	25.00	70.00	50.00	80.00	33.00	70.00	85.00
Brass pipe/lb.	.17	.40	.20	.20	.15	.50	.20
Trolley system/the lot.	400.00	950.00	700.00	365.00	600.00	2,000.00	400.00
Concrete mixing, in place/cu.yd.	3.05	1.65	1.43	1.60	4.35	1.17	1.40
Setting base rings/gun.	100.00	55.00	200.00	200.00	100.00	300.00	100.00
Sand embankment,in place /cu.yd.	.15	.25	.25	.25	.20	.30	.20
Excavation,",/cu.yd.	.15	.25	.25	.25	.20	.25	.18
Fertile earth,"/cu.yd.	.90	1.00	1.20	1.00	1.25	1.25	1.25
TOTAL AMOUNT OF BID BID	$132,179.04	$116,906.70	$119,906.70	$110,813.56	$209,655.03	$123,175.25	$110,931.04

APPENDIX B

Abstract of Proposals for Furnishing Material and Constructing One Emplacement for 10-Inch Rifle Battery.

Furnishing Material + Constructing	Simons & Mayrant	Jacob Friday & Sons	Sanford Brooks & Bonsal	S. F. Leonard
Large stone, per ton.	$2.50	$2.25	$2.25	$2.45
Broken stone, per ton.	2.75	2.50	2.30	2.65
Pon Pon gravel, per cu.yd.	1.30	1.05	1.25	1.20
Sand in bins, per cu.yd.	.25	.40	.25	.97
American Portland Cement /barrel.	2.40	2.35	2.20	1.99
American natural cement /barrel.	1.40	1.05	1.00	.85
Anchor bolts (I) each.	100.00	75.00	100.00	115.65
Steel I-beams, per ton.	58.00	52.00	45.00	57.76
Corrugated iron per pound.	.05	.03 1/2	.04	.04 39/100
Drain cover, per linear ft.	.80	.75	.55	.80 75/100
Iron stairwars 4 ft. wide per step.	12.00	12.00	10.50	4.20
Iron stairways 4 1/2 ft. wide, per step.	12.75	13.00	11.00	4.68

APPENDIX B cont.

Iron stairways 6 ft. wide, per step.	16.00	15.00	13.50	6.30
Cast-iron column (6)/lot	125.00	90.00	125.00	280.41
Iron landings/job.	40.00	40.00	75.00	10.00
Small doors & hinges/ea.	63.00	55.00	50.00	27.32
Large doors & hinges/ea.	70.00	80.00	65.00	38.19
Brass pipe/lb.	.22	.20	.50	.40 35/100
Trolley system/job.	300.00	240.00	150.00	333.24
Ammunition hoist & cranes /lot.	1,500.00	1,600.00	1,700.00	935.00
Concrete mixing/cu.yd.	1.52	1.60	1.40	1.56
Setting base ring/ea.	300.00	200.00	150.00	60.00
Sand embankment /cu.yd.	.18	.25	.25	.60
Excavation/cu.yd.	.18	.25	.25	.40
Fertile earth/cu.yd.	1.00	1.00	.75	1.75
TOTAL AMOUNT OF BID	$78,705.50	$70,969.50	$66,612.80	$73,196.79

APPENDIX C

Money Statements--Battery Jasper--July 1, 1897

Plans for 10-Inch Rifle Emplacements

August 31, 1896, amount allotted	$500.00
June 30, 1897, amount expended during fiscal year	500.00

Salaries and Office Expenses

December 11, 1896, amount allotted	9,500.00
June 30, 1897, amount expended during fiscal year	3,629.01
July 1, 1897, balance unexpended	5,870.99
July 1, 1897, outstanding liabilities	825.00
July 1, 1897, balance available	5,045.99

Payments under Contracts

March 26, 1897, amount allotted	$150,000.00
June 30, 1897, amount expended during fiscal year	55,971.23
July 1, 1897, balance unexpended	94,028.77
July 1, 1897, outstanding liabilities	33,621.27
July 1, 1897, amount covered by uncompleted contracts	91,422.53
TOTAL	$125,043.00

APPENDIX D

Amounts and Dates of all Allotments for Battery Jasper

Date of Act	Allotment	Amount	Remarks
June 6, 1896	August 31, 1896	$500	Plans & Drawings.
June 6, 1896	Dec. 1, 1896	9,500	Supervision.
March 3, 1897	March 26, 1897	150,000	Contract payments
March 3, 1897	Aug. 26, 1897	10,000	Contract payments
March 3, 1897	Nov. 16, 1897	65,000	Contract payments & Supervision
	TOTAL	$235,000	

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ILLUSTRATIONS

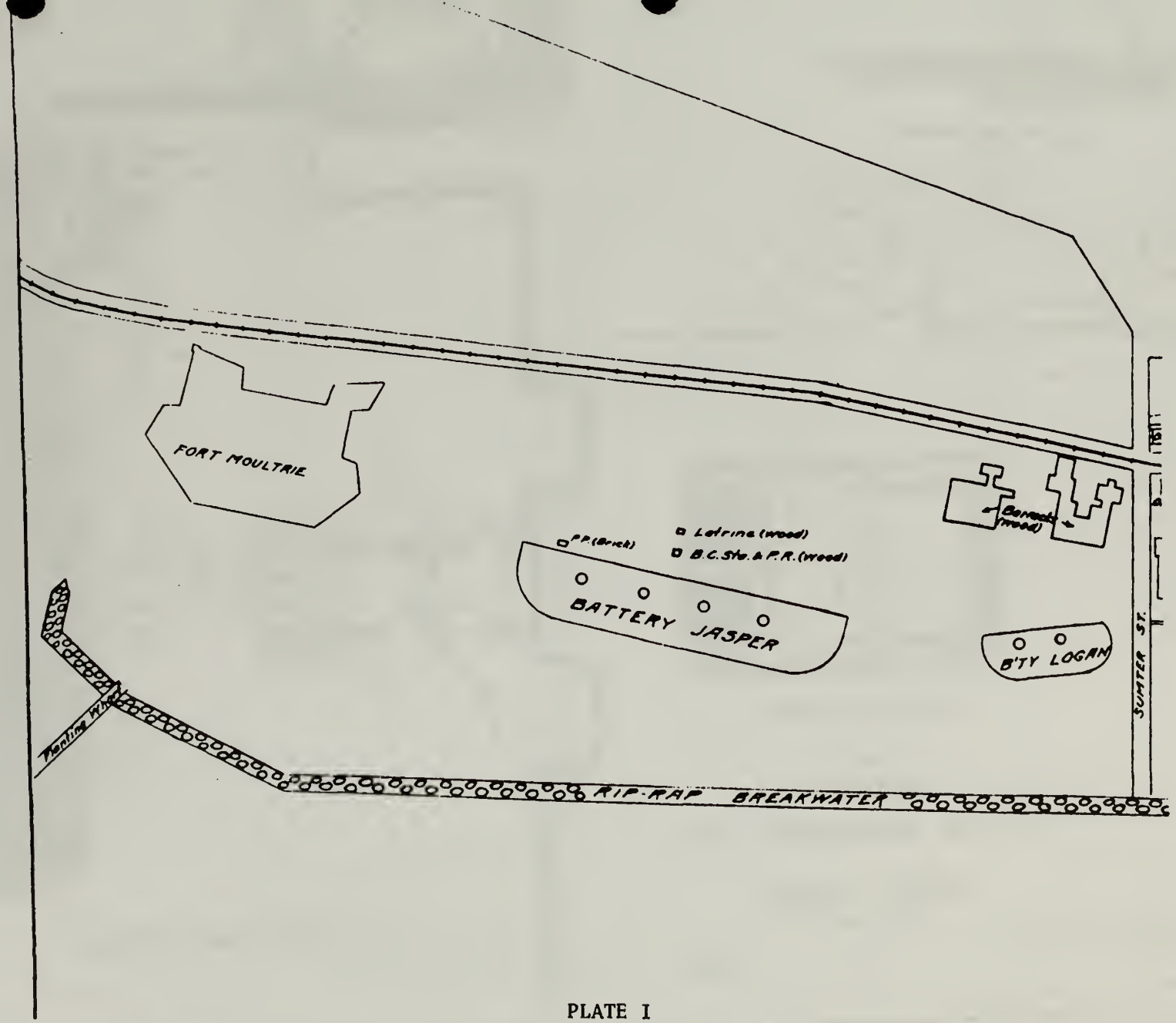
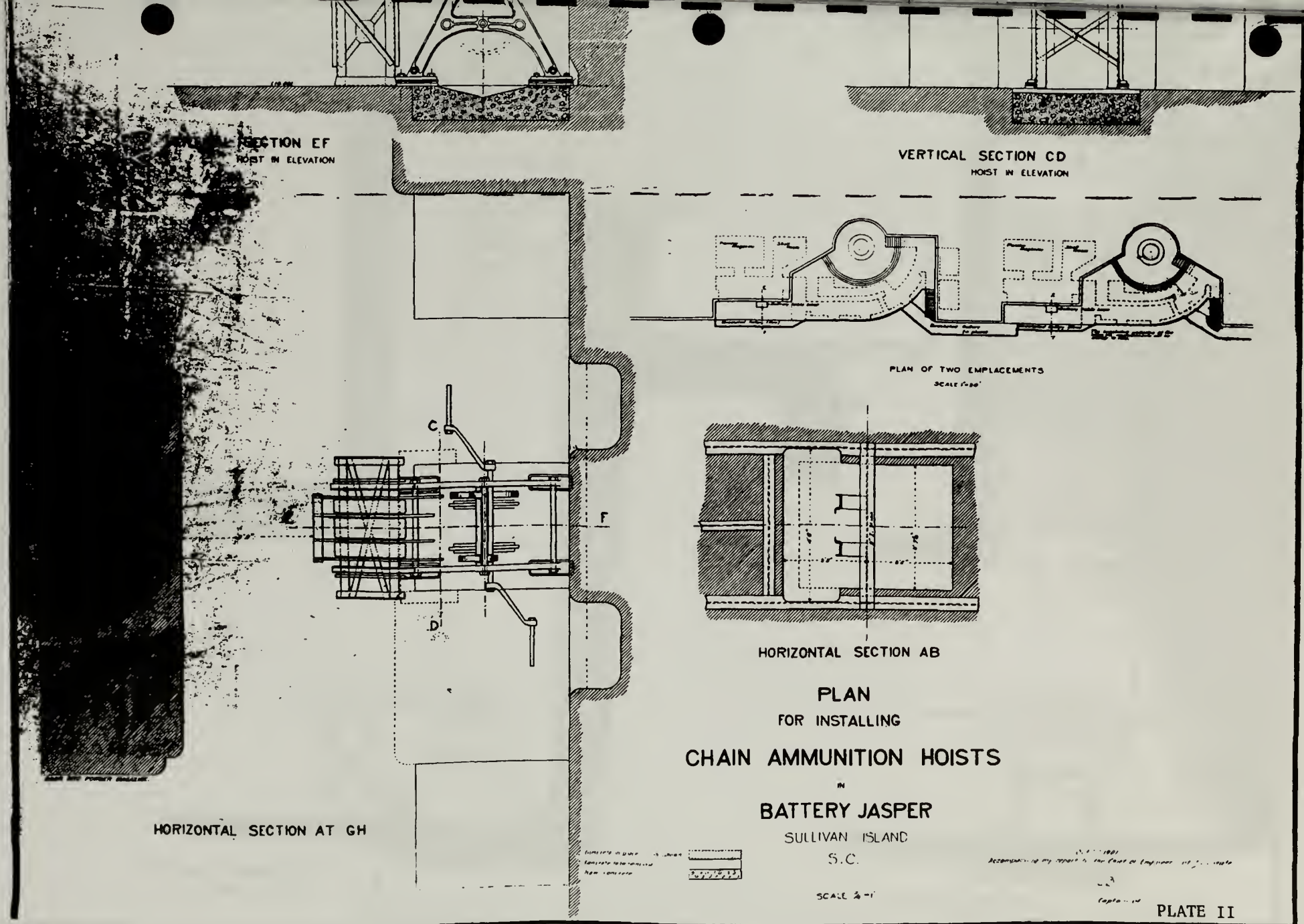
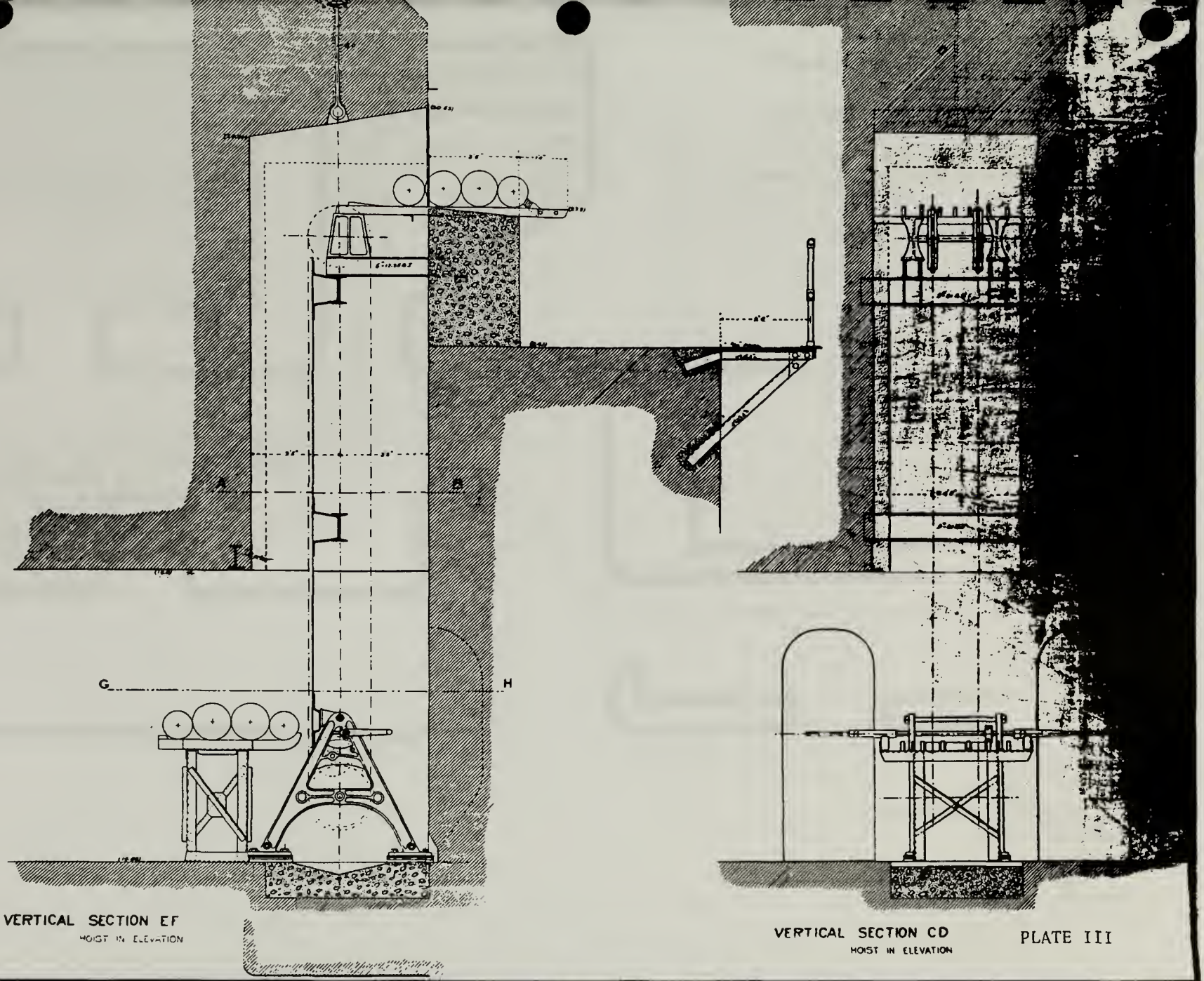

FORT MOULTRIE
P.P. (Brick)
Latrine (wood)
B.C. Sta. & P.R. (wood)
BATTERY JASPER
Barracks (wood)
B'TY LOGAN
SUMTER ST.
RIP-RAP BREAKWATER

PLATE I

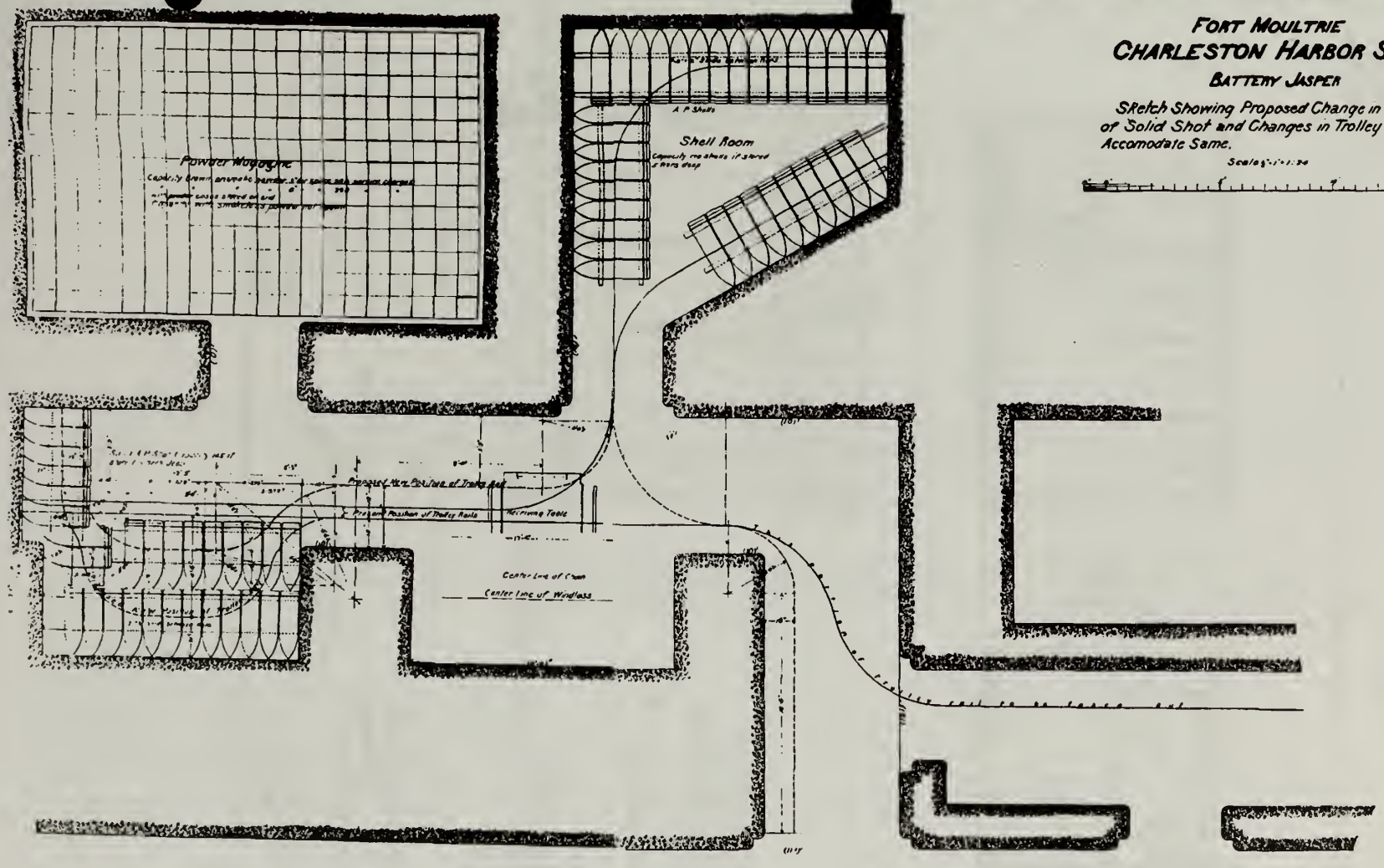

SECTION EF
HOIST IN ELEVATION
VERTICAL SECTION CD
HOIST IN ELEVATION
PLAN OF TWO EMPLACEMENTS
C
F
D
HORIZONTAL SECTION AB
HORIZONTAL SECTION AT GH
PLAN
FOR INSTALLING
CHAIN AMMUNITION HOISTS
IN
BATTERY JASPER
SULLIVAN ISLAND
S.C.
PLATE II



VERTICAL SECTION EF
HOIST IN ELEVATION

VERTICAL SECTION CD
HOIST IN ELEVATION

PLATE III



FORT MOULTRIE
CHARLESTON HARBOR S.C.
BATTERY JASPER

Sketch Showing Proposed Change in Storage of Solid Shot and Changes in Trolley Rails to Accomodate Same.

Scale 1" = 1:20

PLATE IV

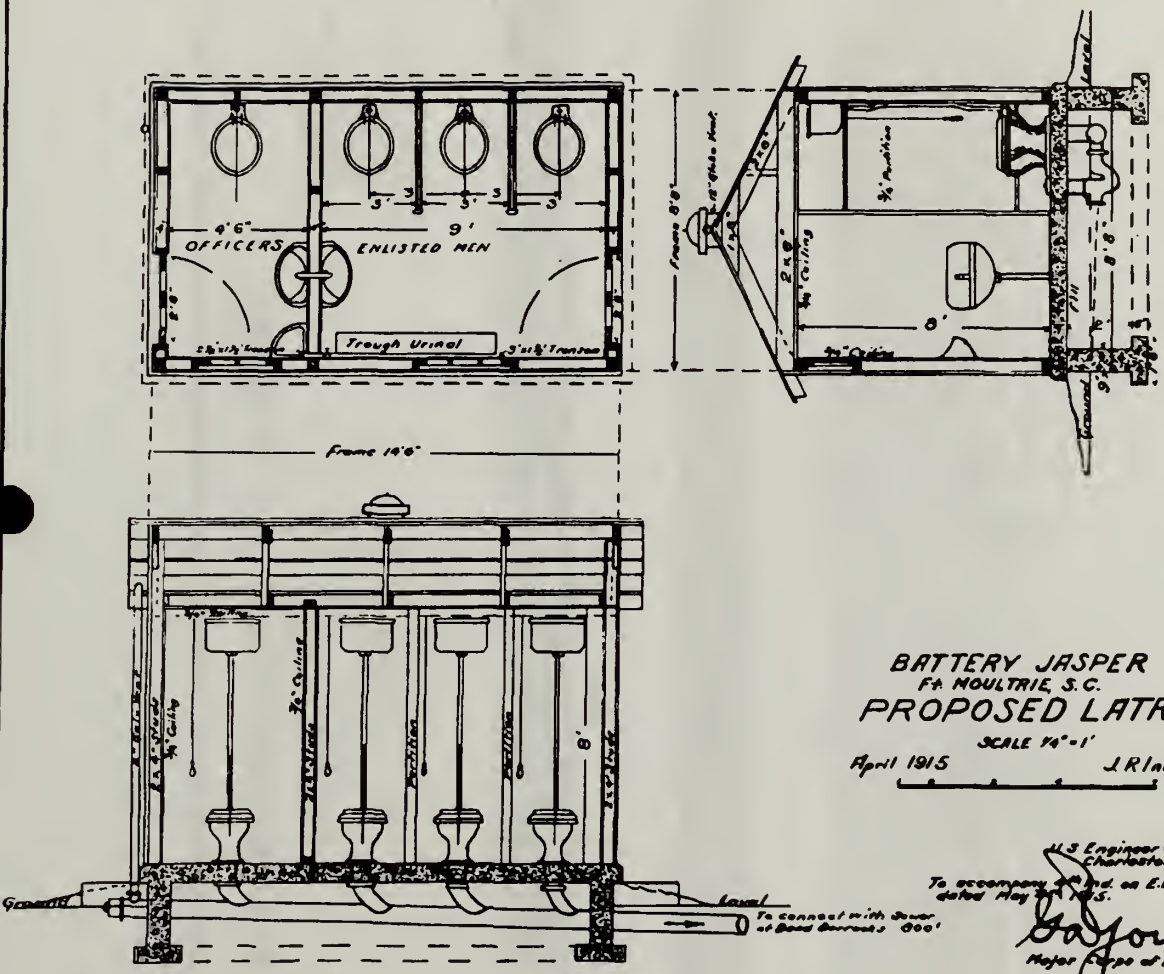
U.S. Engineer Office
Charleston S.C.
Mar. 27-1905
Transmitted to the Chief of Engineers U.S.A. with letter of this date
G. T. Leland
Captain, Corps of Engineers, U.S.A.

65-26-15

n. 65, Sh. 26
24

WAR DEPARTMENT

CORPS OF ENGINEERS, U.S. ARMY.



BATTERY JASPER
Ft. MOULTRIE, S.C.
PROPOSED LATRINE
SCALE ¼"=1'
April 1915 J.R. Inman.

U.S. Engineer Office,
Charleston, S.C.
To accompany 2nd Ind. on E.D. 18116/13,
dated May 7, 1915.
G. A. Youngberg
Major Corps of Engineers, U.S.A.

Office Chief of Engineers,
U.S. Army.
May 27, 1915.
Submitted to the Secretary of War;
approval recommended.
[illegible]
Chief of Engineers.

War Department,
June 1, 1915.
Approval recommended.
[illegible]
Chief of Coast Artillery.

War Department, June 2, 1915.
Approved.
By order of the Secretary of War:
[illegible]
Major Gen. Chief of Staff.

PLATE V

10 IN. DISAPPEARING GUN BATTERY
ON
SULLIVAN ISLAND S.C.

Scale 1in.=20 feet

Note: Office Chief of Engineers
Plans of Retreats & Mag
See 1898

b [redacted] magazines
c Storage Battery Rooms
d Solid Shot
e Relocating
f Store Rooms
g Gun Pits
h Ammunition Hoists
i Latrine
j Cranes
k Lookout Station

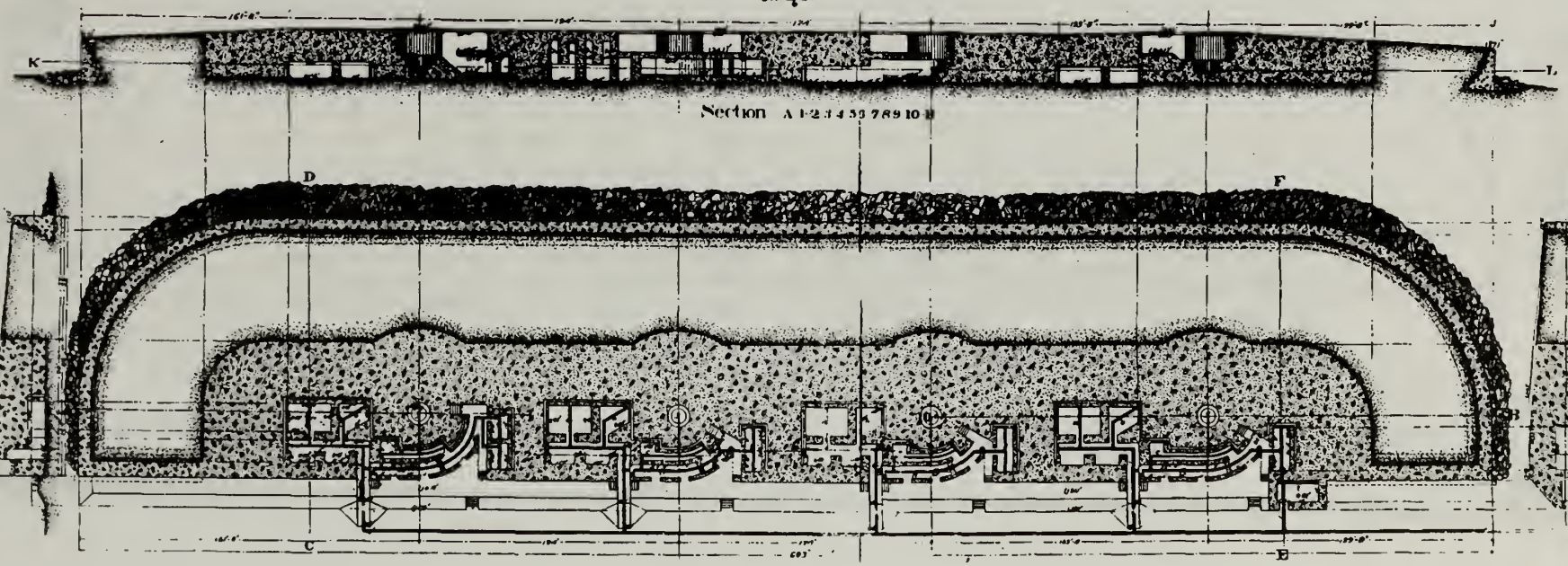
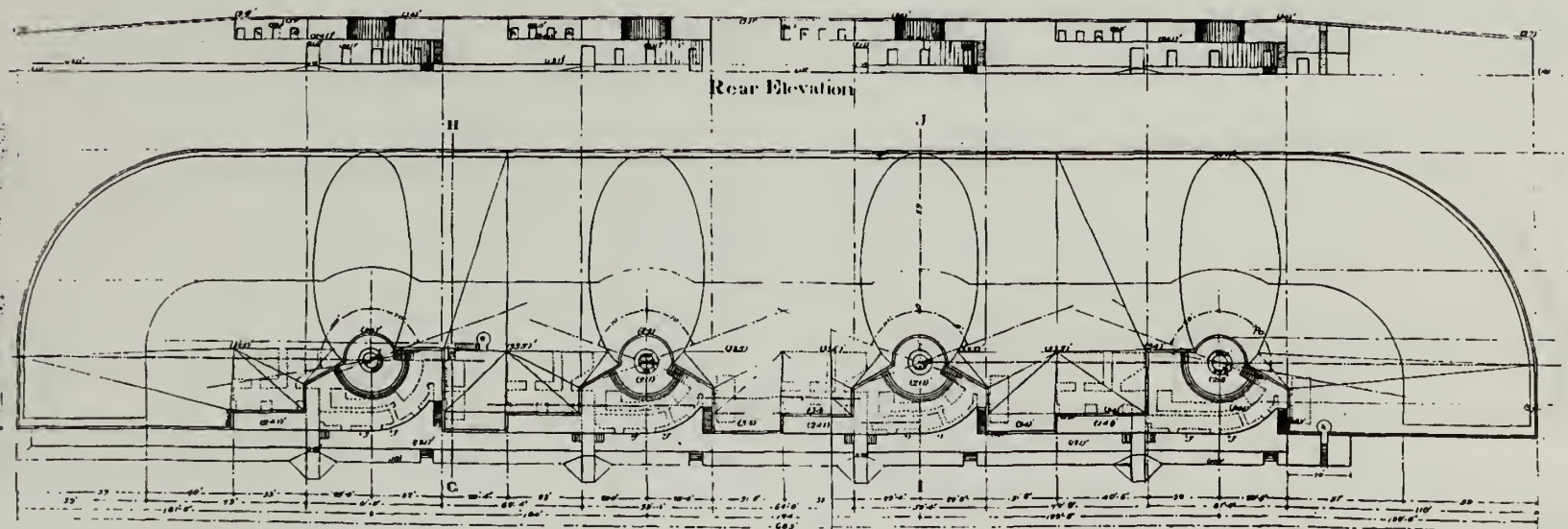


PLATE VI

Horizontal Section at Reference (161)

Section K L

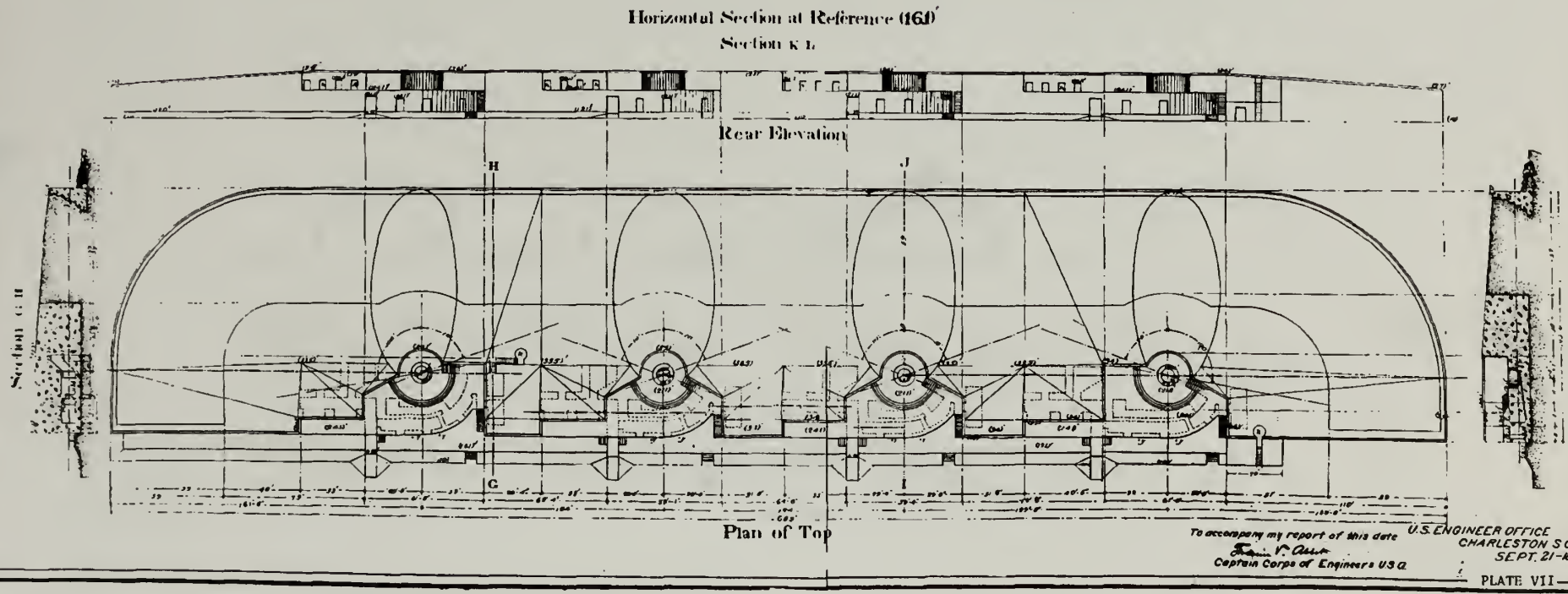


Plan of Top

To accompany my report of this date
Frank V. Ross
Captain Corps of Engineers U.S.A.

U.S. ENGINEER OFFICE
CHARLESTON S.C.
SEPT. 21-1896

PLATE VII


Horizontal Section at Reference (160)
Section K L
Rear Elevation
H
J
G
I
Section G H
Section I-J
Plan of Top
To accompany my report of this date
Captain Corps of Engineers U.S.A.
U.S. ENGINEER OFFICE
CHARLESTON S.C.
SEPT. 21-1896
PLATE VII

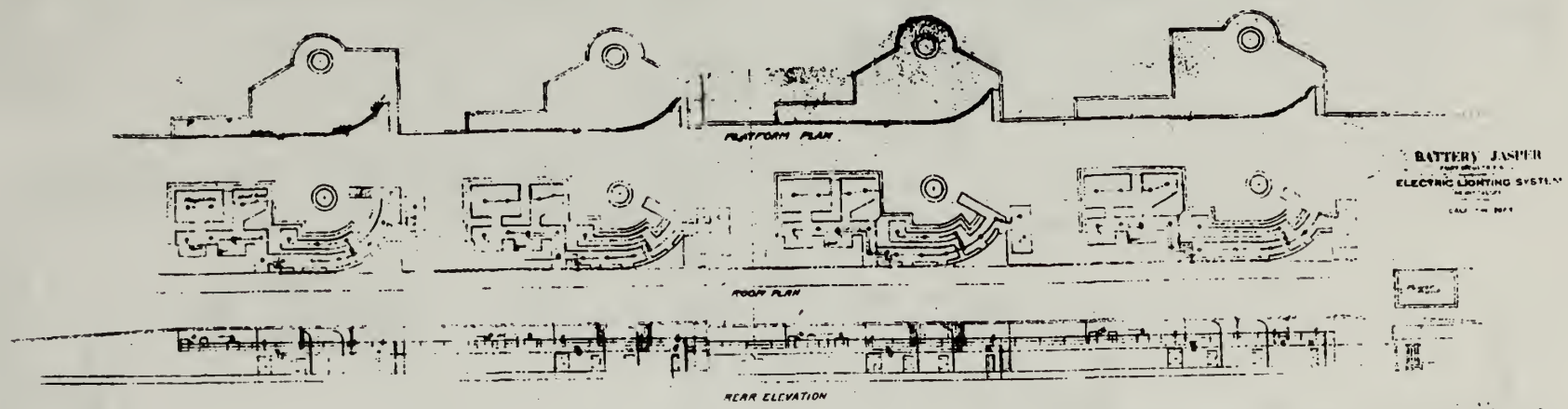
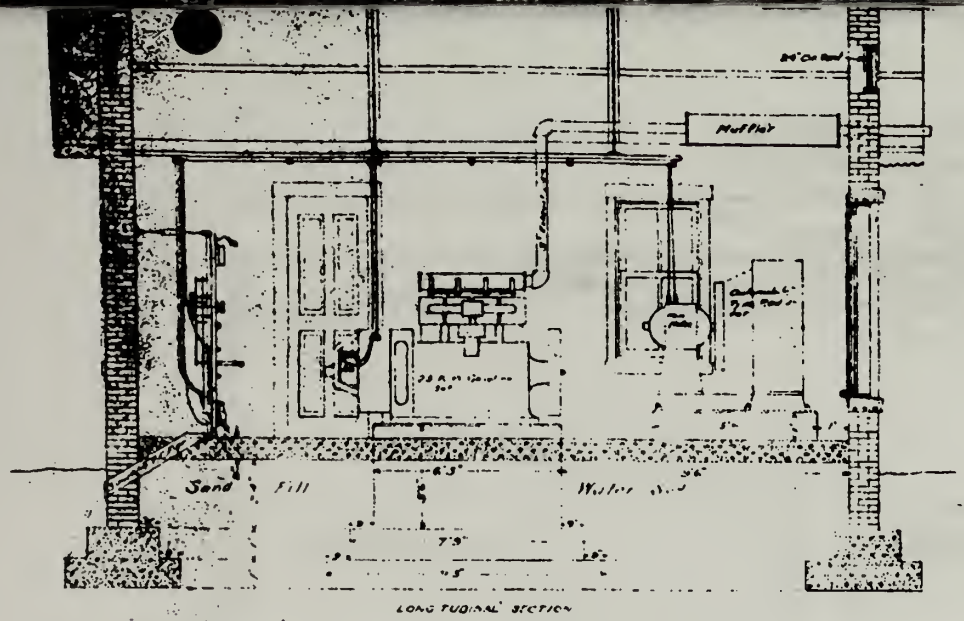
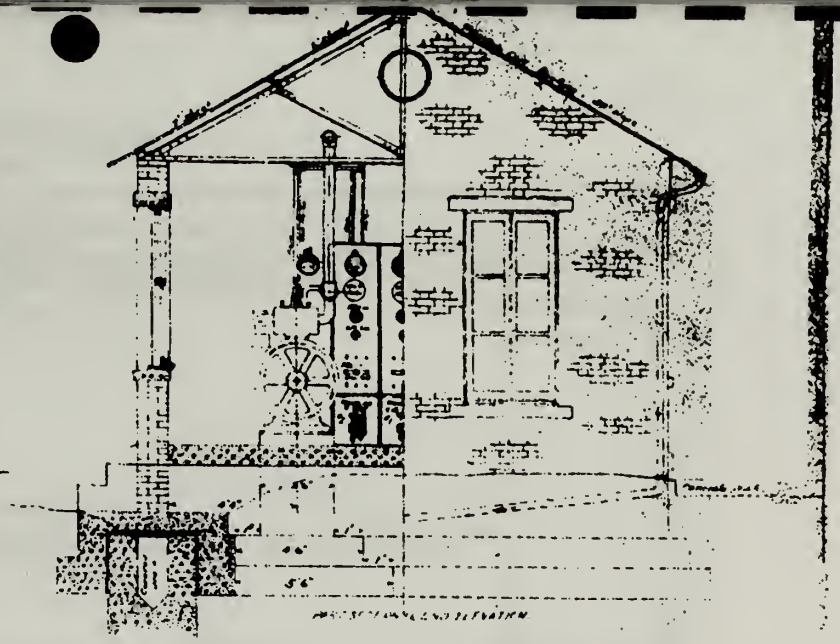
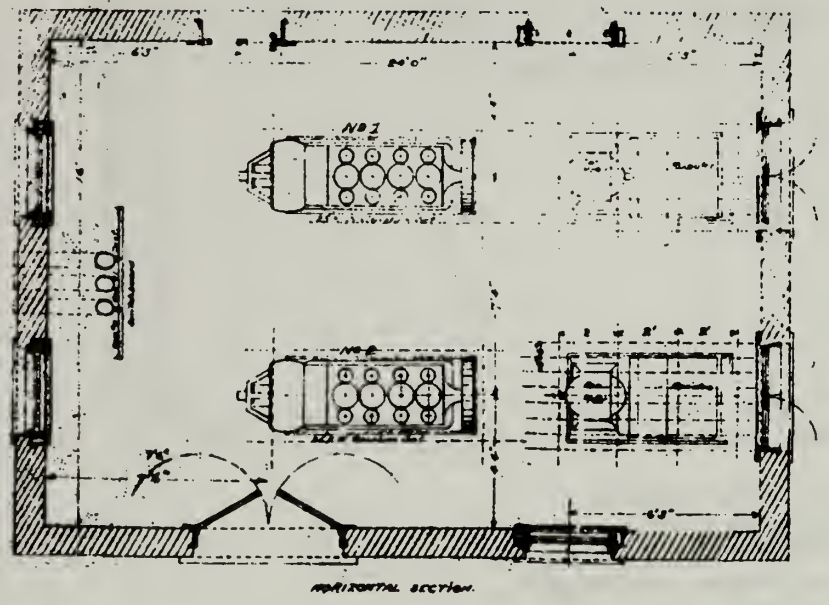
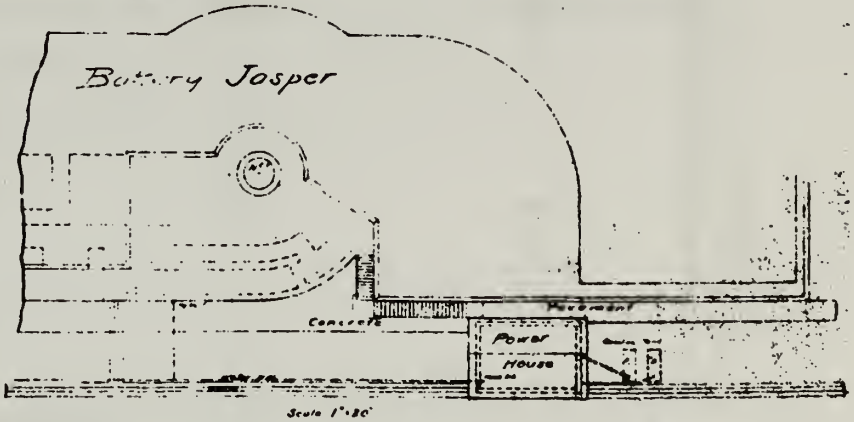

PLATFORM PLAN
BATTERY JASPER
ELECTRIC LIGHTING SYSTEM
ROOM PLAN
REAR ELEVATION

PLATE VIII









POWER-HOUSE

-FOR-

BATTERY JASPER.

Fort Moultrie

S.C.

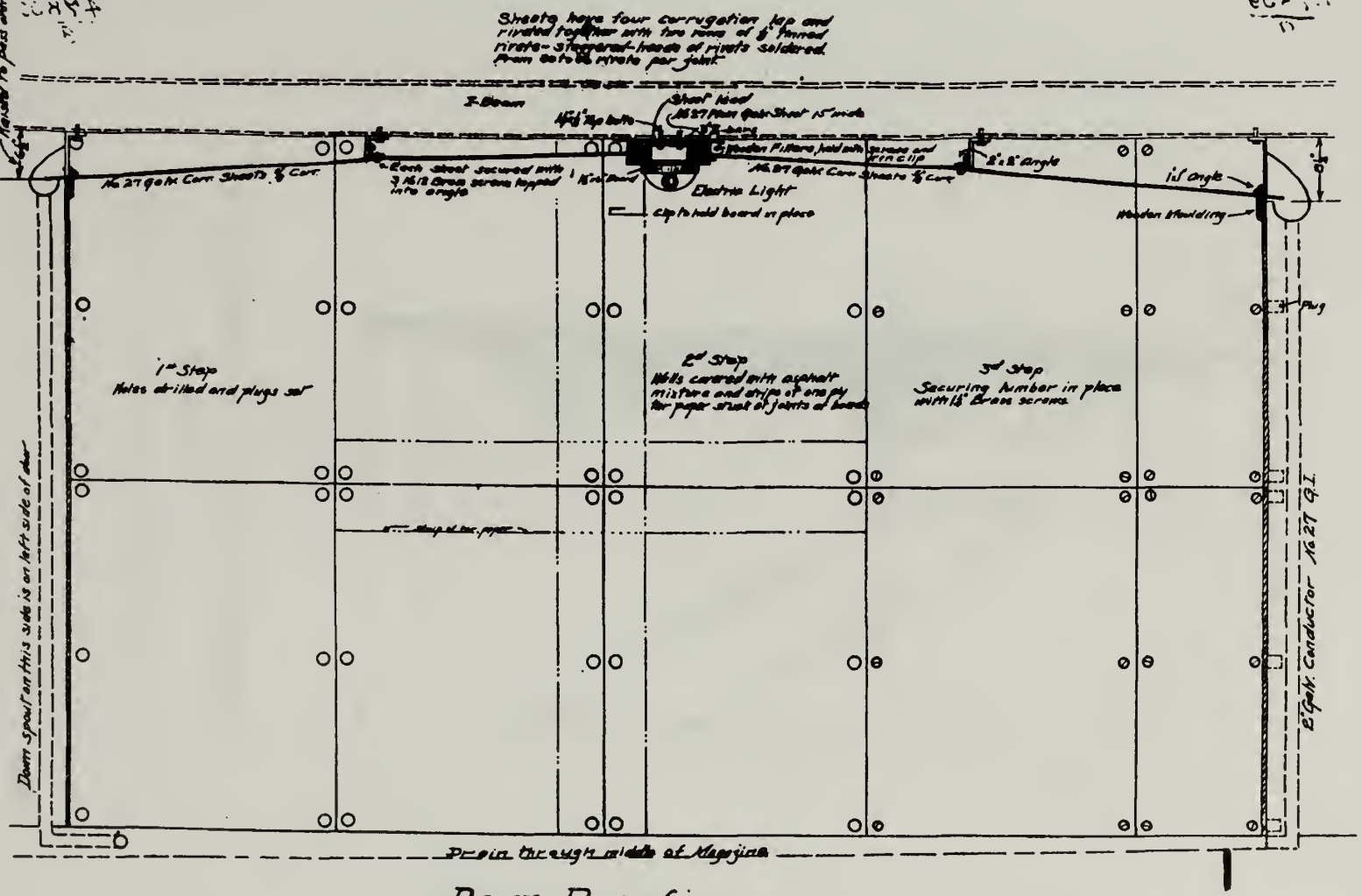
Scale: ¼ in = 1 ft.

U.S. Engineer Office
Charleston, S.C. Jan 3, 1910
Examined and found correct in all details

PLATE IX

Sheet. 26
11

Sheet 1.



Damp Proofing

Powder Magazine No. 3

10-Inch Battery

Magnesia Lumber and Metal Ceiling.

Scale ½"=1'

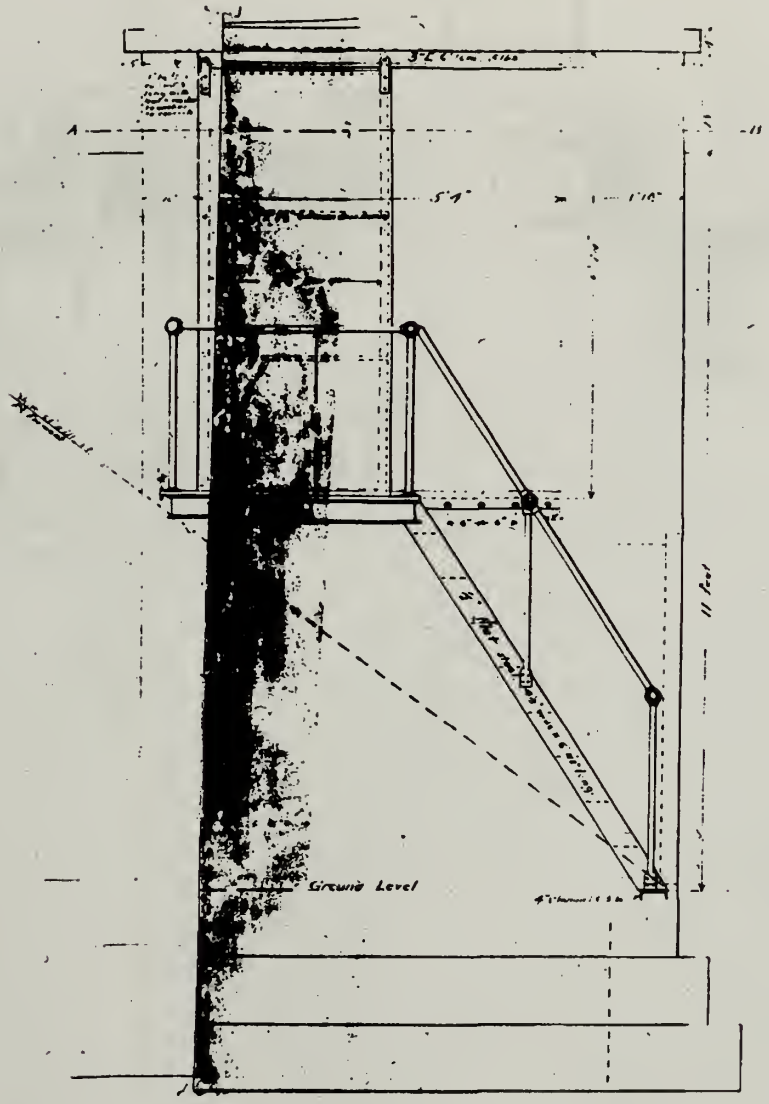
Fort Moultrie S.C.

U.S. Engineer Office,
Charleston, S.C., August 18, 1903.

Accompanying my report of this date.

G. P. Howell
Captain, Corps of Engineers

PLATE X



TELEPHONE AND TELAUTOGRAPH
BOOTH

BATTERY JASPER AT FORT FREMONT,
S. C.

Scale: 1 Foot

PLATE XI

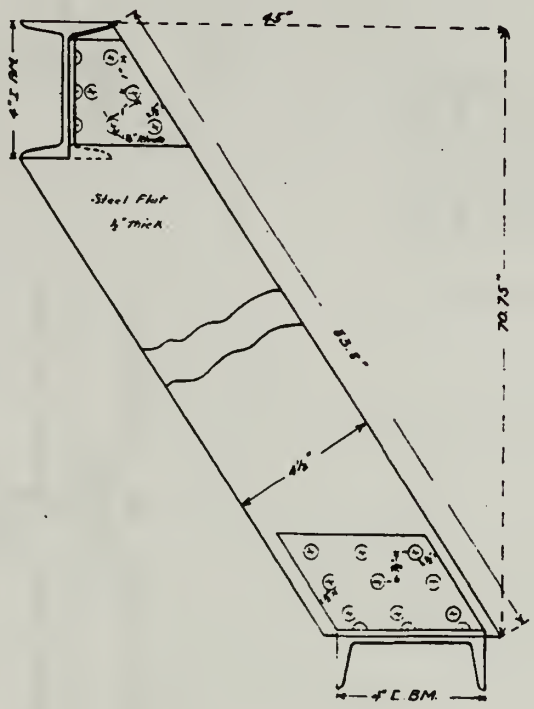
TELEPHONE and TELAUTOGRAPH BOOTH

for

BATTERY JASPER and FORT FREMONT, S. C.

Scale: 1 in = 1 foot.

U. S. Engineer Office,
Charleston, S.C., Oct. 14, 1903.
Accompanying my report of this date
J. F. Kinnard
Captain Corps of Engineers



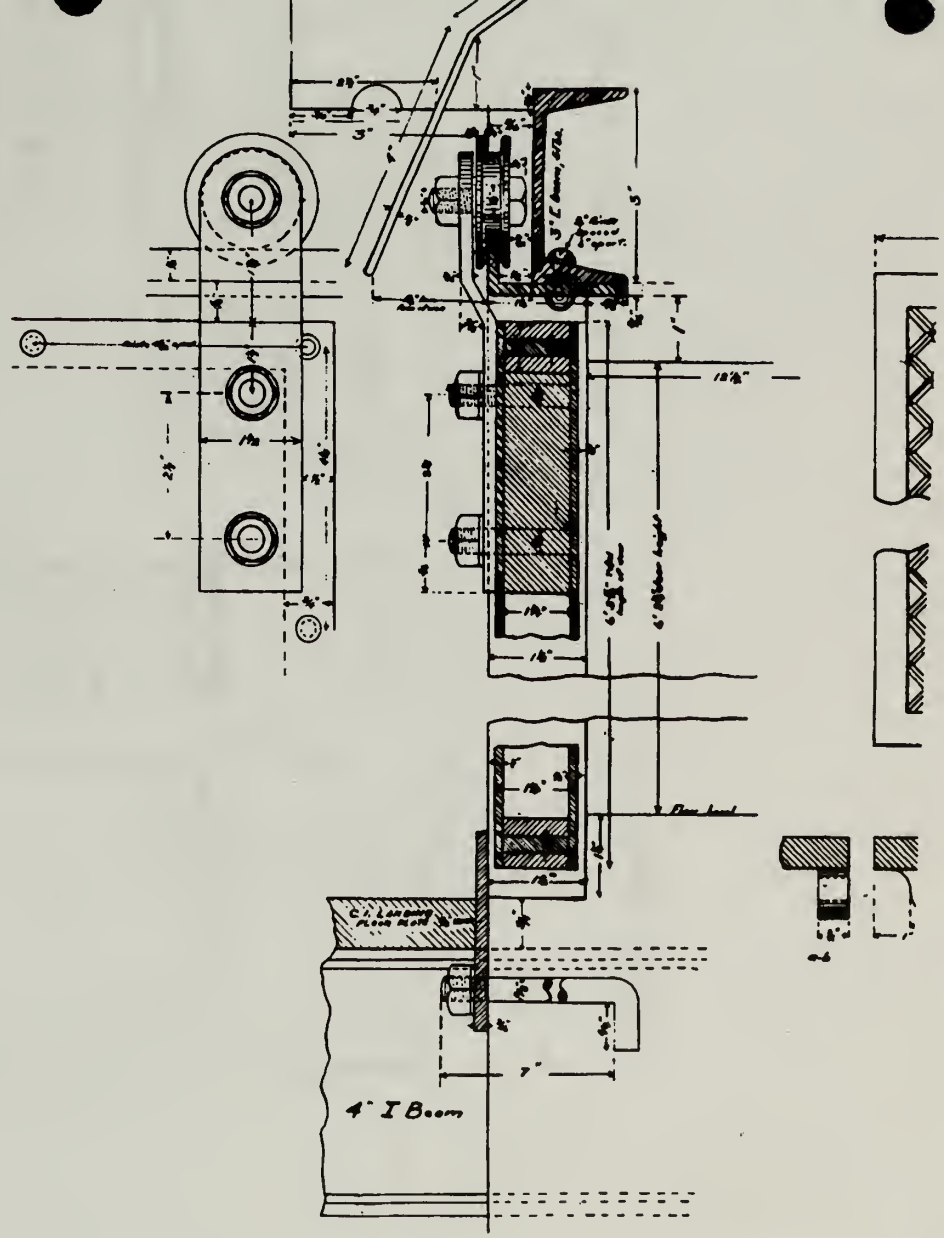
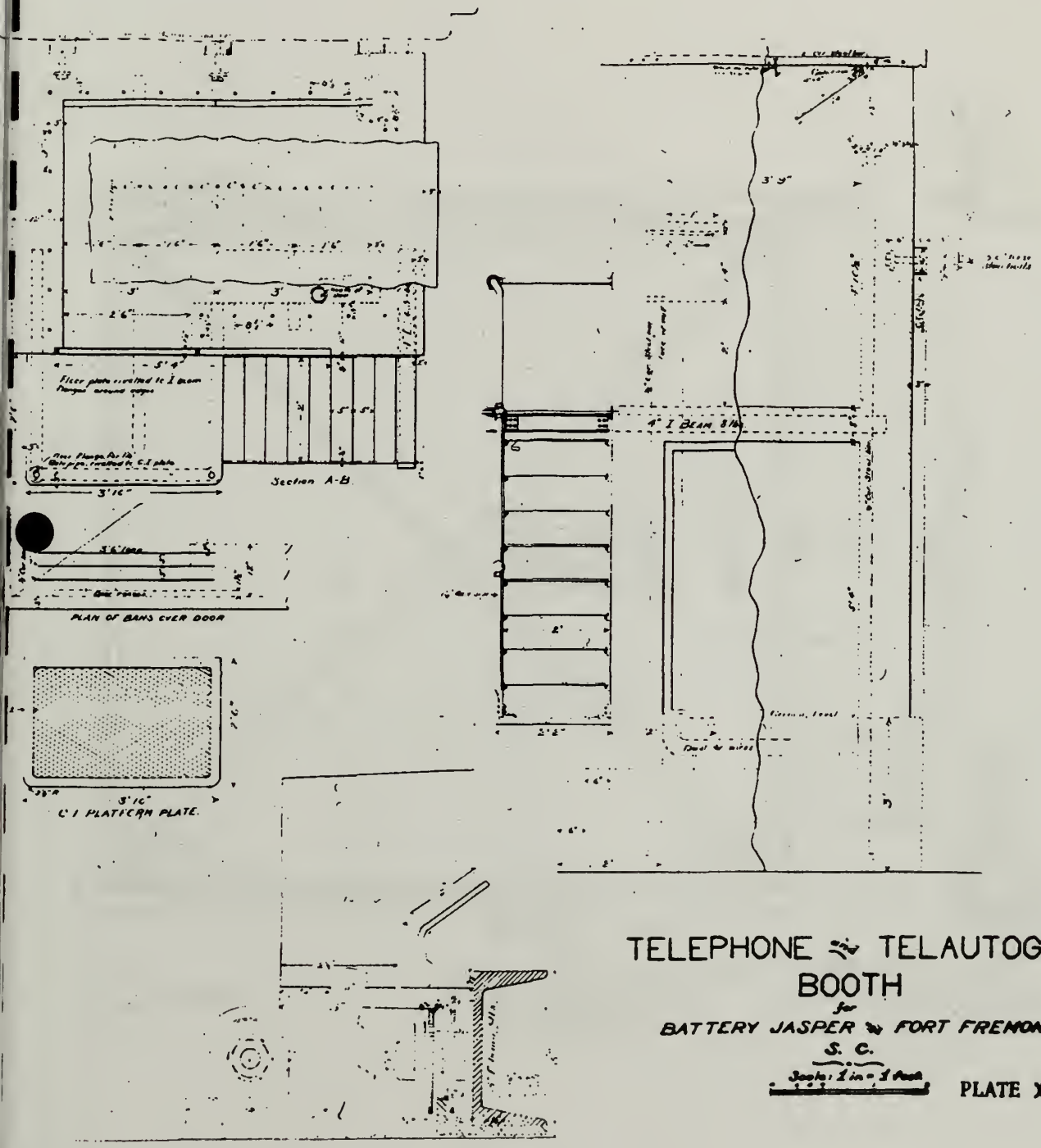


PLATE XII



TELEPHONE & TELAUTOGRAPH BOOTH

for

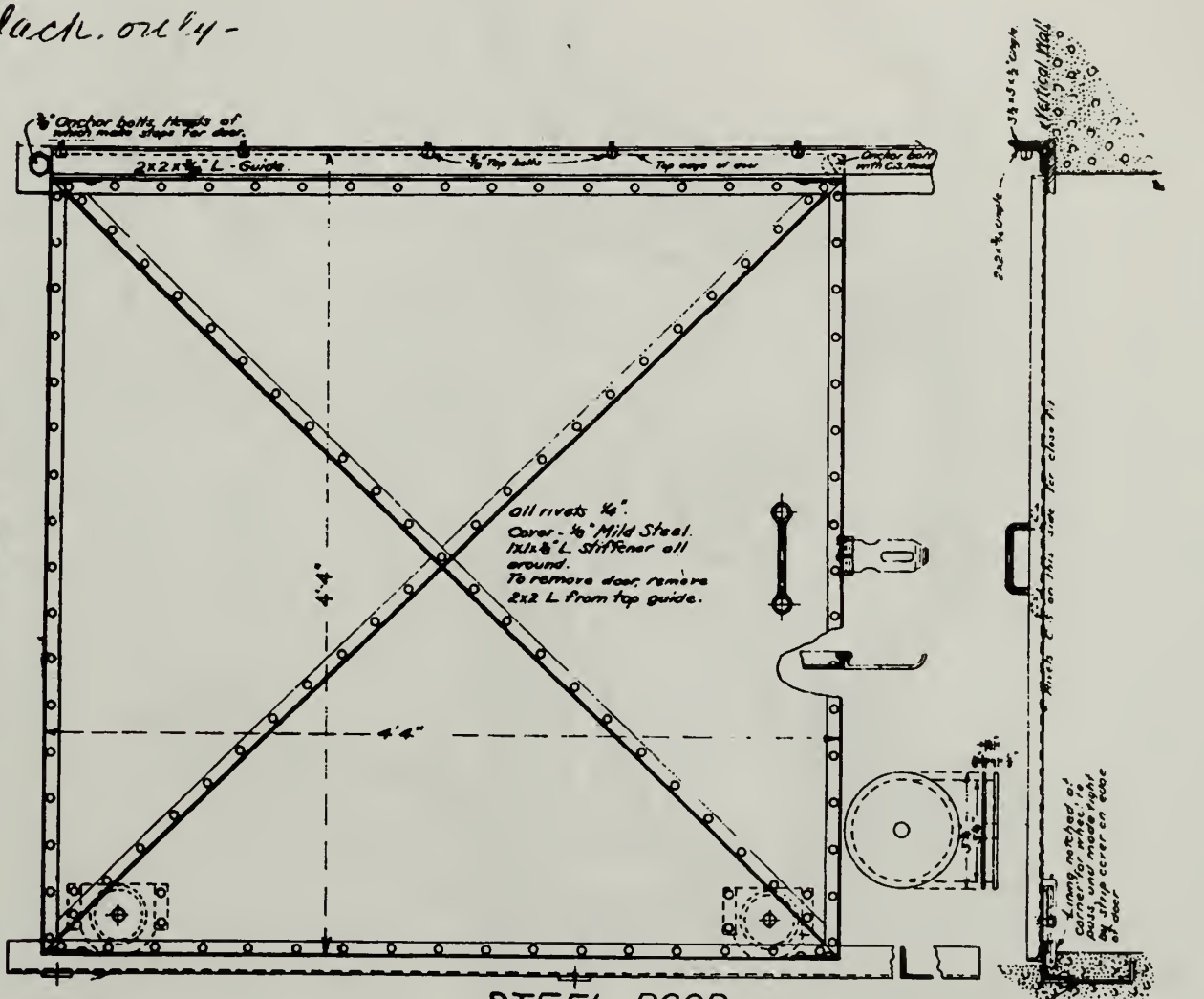
BATTERY JASPER & FORT FREMONT,

S. C.

Scale: 1 in = 1 Foot

PLATE XIII

Black. only -



STEEL DOOR
for
Teloutograph Niche No 4.
BATTERY JASPER.
Fort Moultrie, S. C.
Scale: 1/8"-1'-0".

U.S. Engineer Office
Charleston, S.C. Aug. 18, 1904.
Accompanying my letter of this date to The Chief of Engineers, U.S.A.
H. P. Howell
Captain, Corps of Engineers

Full scale

PLATE XIV

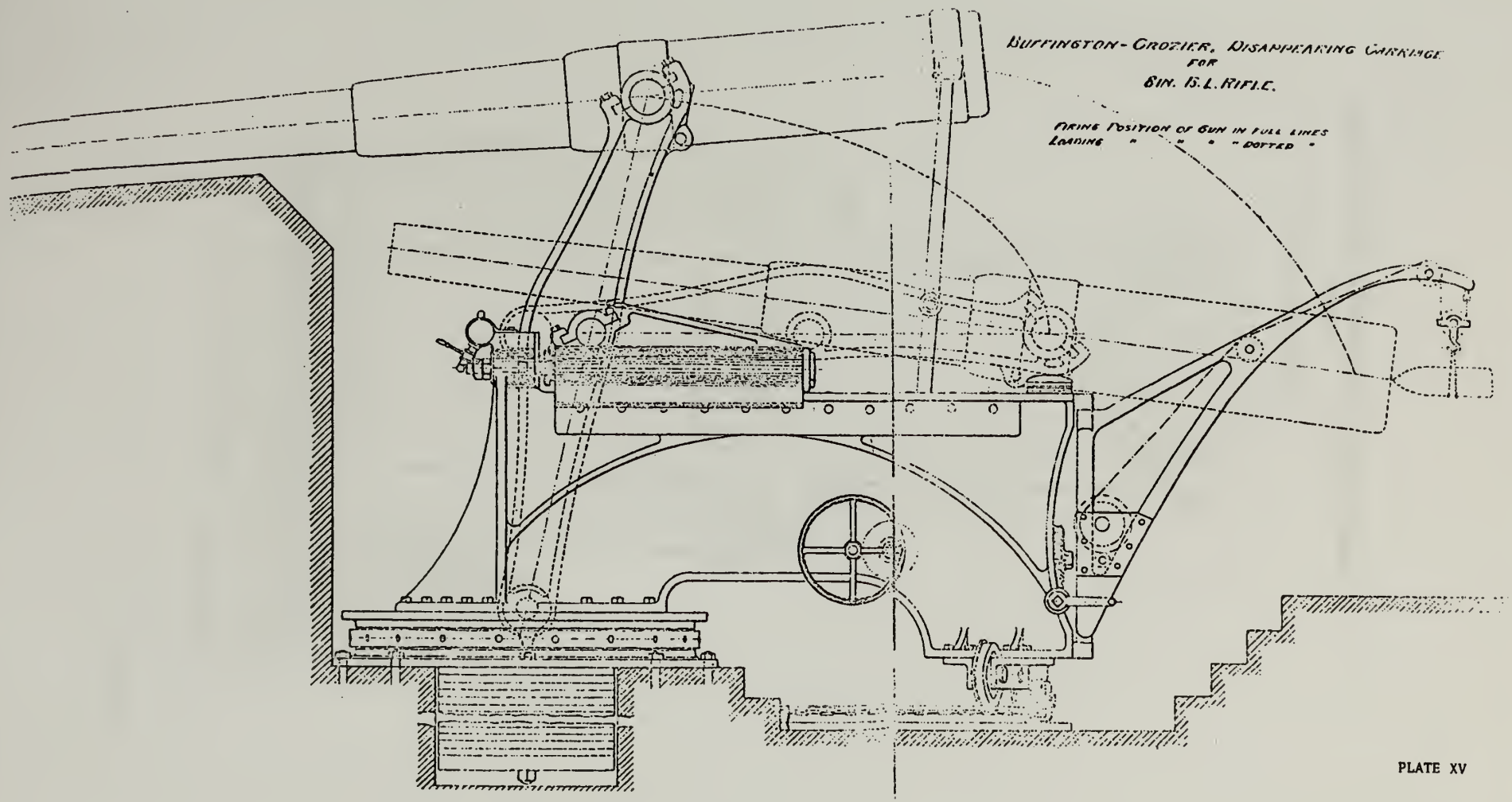
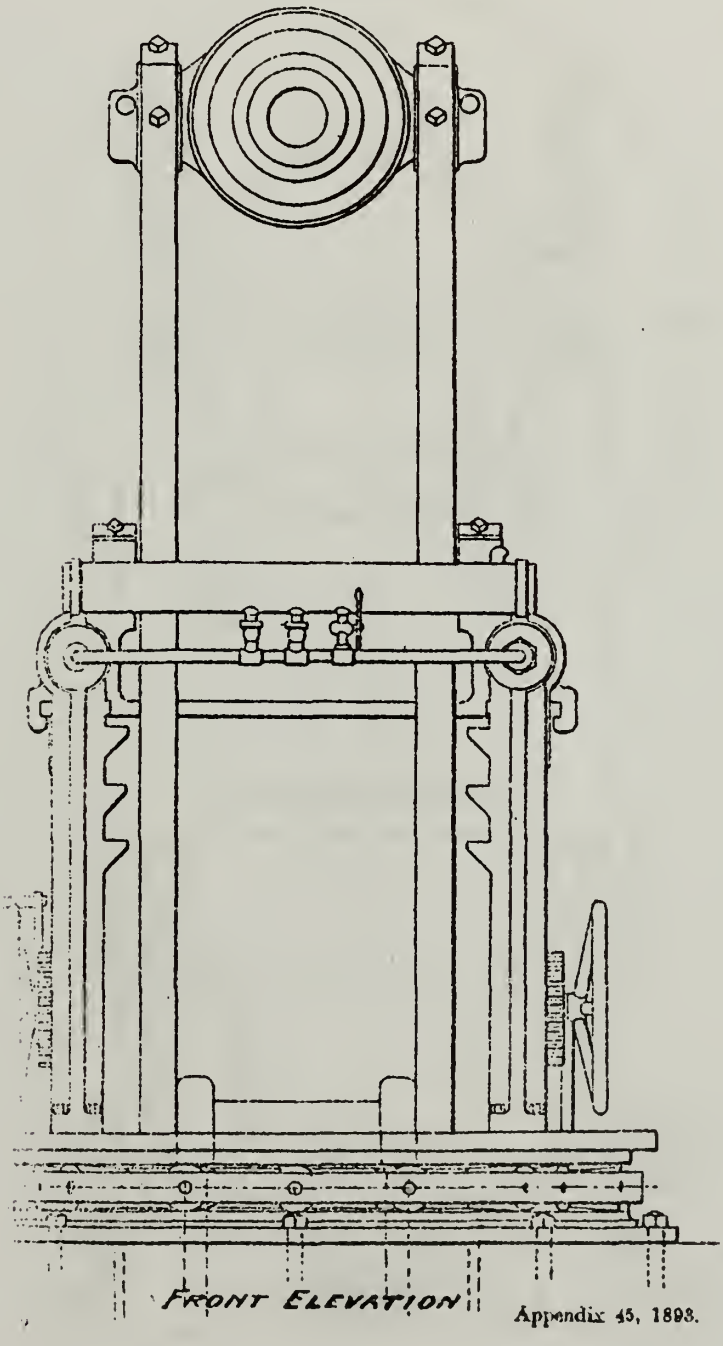

BUFFINGTON-CROZIER, DISAPPEARING CARRIAGE
FOR
8IN. B.L. RIFLE.
FIRING POSITION OF GUN IN FULL LINES
LOADING " " " " DOTTED "

PLATE XV

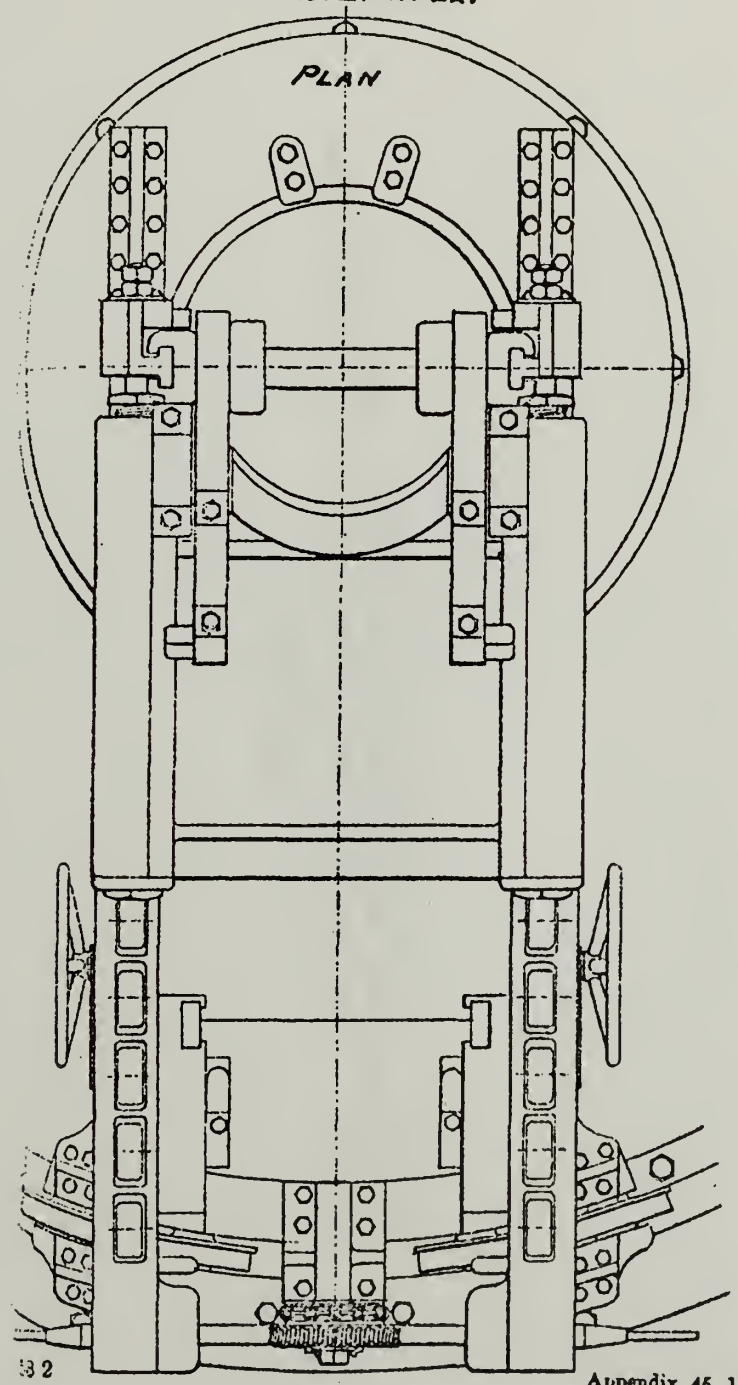
BUFFINGTON-CROZIER CARRIAGE
FOR
8IN. B. L. RIFLE.



Appendix 45, 1893.

PLATE XVI

BUFFINGTON-CROZIER CARRIAGE
FOR
8IN. B. L. RIFLE.



B 2

Appendix 46 1893.

PLATE XVII

PLATE XVIII

Photograph. Panoramic View from the West Elevation of Battery Jasper, showing "the Plant" as Positioned by Jacob Friday & Sons in Early March 1897. National Archives, RG 77, F-64-111-1.

PLATE XVIII

PLATE XIX

Photograph of Jacob Friday & Sons' Workmen Positioning a Base Ring for one of the 10-Inch Rifles. National Archives, RG 77, F-64-121-2.

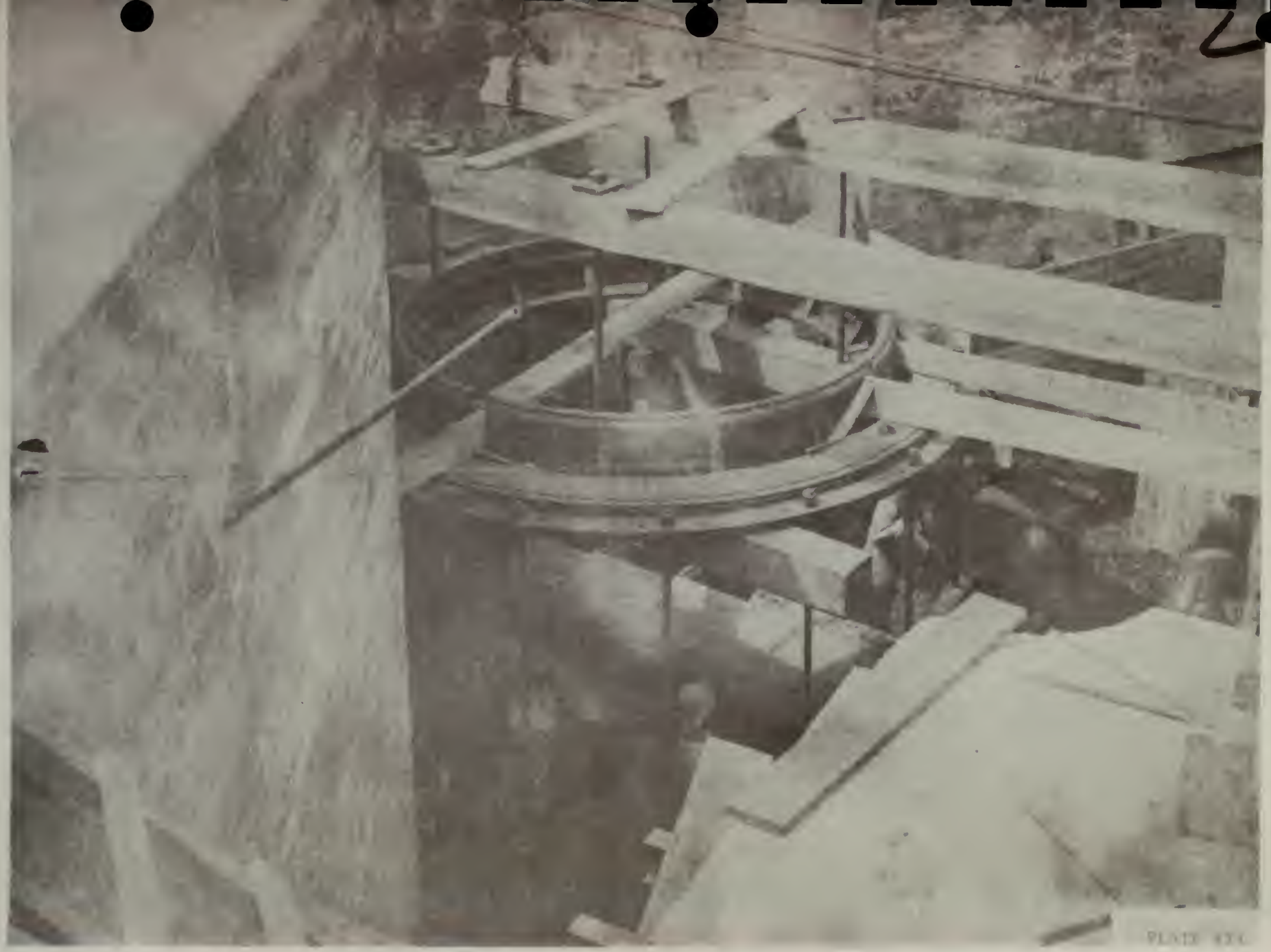


PLATE XXI

PLATE XX

Photograph from the West of the Three Emplacements under Contract to Jacob Friday & Sons. Note: how "the plant" operates. National Archives, RG 77, F-64-115-2.

PLATE XX

PLATE XXI

Photograph. With the Casings in Position, Concrete was Poured and Allowed to Set. National Archives, RG 77, F-64-114-12.

PLATE XXI

PLATE XXII

Photograph. Looking West across Glacis toward Fort Moultrie. To the left is the seawall and to the right is the exterior slope of Emplacement No.2, Sept. 8, 1897. The space between the seawall and the exterior slope was filled with sand and sodded. National Archives, RG 77, F 64-121-4.

PLATE XVII

PLATE XXIII

Photograph. Looking West across Glacis toward Fort Moultrie. From a position due east of that occupied by the cameraman when he took the photograph found on Plate XXVIII, Sept.8, 1897. National Archives, RG 77, F-64, 121-3.

3

PLATE XXIV

Photograph of the East Flank of Battery Jasper. Showing the portion of the work east of Emplacement No.4, Sept. 8, 1897. National Archives, RG 77, F-64-121-6.

PLATE XXIV

PLATE XXV

Photograph. Inside the Casemate of Battery Jasper. Note the trolley, drain, and corrugated iron-roofing, Sept. 8, 1897. National Archives, RG 77, F 64-121-5.

PLATE XXI
"D" BATTERY

PLATE XXVI

Photograph. Section above Magazine Area, to the Left of One of the Gun Pits. Sept. 8, 1897. The ammunition hoists delivered the projectiles and powder through the second opening from the left. National Archives, RG 77, F-64-121-8.

PLATE XXVI

PLATES XXVII, XXVIII, XXIX, & XXX

Photographs of the Test-Firing of a 10-Inch Breech-Loading Rifle.

PLATE XXIX

PLATE XXX

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GPO 870-52

PLATE XXVII

PLATE XXVIII