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# An investigation of the history of the Virginia manufactory of arms

James N. Haskett
*University of Richmond*

# AN INVESTIGATION OF THE HISTORY OF THE VIRGINIA MANUFACTORY OF ARMS

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James N. Haskett

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## CHAPTER I

### THE PERIOD OF PLANNING AND DEVELOPMENT(1798-1822)

The first years of freedom were not calm ones for the people of the new Republic. This was as true in Virginia as elsewhere. In the State itself there was the ever present danger of slave insurrection and the Wars of the French Revolution which raged in Europe were in grave danger of spreading into this hemisphere. This situation caused the State to make provisions to secure four thousand stands of arms for its militia in 1796.[1] This proved to be a very difficult task, for the European hostilities had seriously limited the amount of arms available.

Though Virginia had produced a large portion of the arms manufactured in the Colonies during the Revolution, the two principal armories were no longer functioning. One, at Westham, on the James River, had been destroyed by a British force under Benedict Arnold.[2] The larger one, located at Fredericksburg, had been abandoned because of a lack of funds.[3] The Governor sent John Dawson and others to several of the northern states in an effort to procure the needed four thousand stands of arms. After visiting and negotiating with a

1. Author's Note: A stand of arms includes the musket, bayonet cartridge-box, ramrod, brush wiper for the pan, and a picker for the touchhole.

2. Kathleen Bruce, Virginia Iron Manufacture in The Slave Era (New York: The Century Company, 1931), p. 62, citing Writings of Jefferson, II, pp. 408, 394, 475, 423.

3. Ibid., p. 78, citing Writings of Jefferson, II, p. 426.

number of Northern arms manufacturers, Mr. Dawson finally recommended Mr. James Swan of Boston to furnish the weapons.[4] The specifications of these weapons were listed in a letter from Mr. Dawson to Mr. Swan on September 11, 1796. They were to be of the following description:

> The barrel was to be three feet, eight inches, it was to take balls which were 18 to the pound, the bayonet was to be one foot, five inches in the blade, it was to have a double bridle-lock of the best construction, neat brass mountings and a steel ramrod and to be stocked in black walnut. There was also to be a cartridge box (24 cartridge capacity), a brush-wiper for the touch-hole.[5]

On September 12, 1796, Mr. Swan sent his terms for the manufacture of the arms. In two years, he would manufacture twenty thousand stands at the rate of ten thousand per year. These would cost twelve dollars per stand payable on delivery or eleven dollars and fifty cents per stand if half the price were advanced after giving security at Richmond. There was also the provision that if black walnut couldn't be located, another suitable wood could be used. Two models, with seals affixed, were to be produced, one was to be located at Richmond and the other at Boston and the finished arms were to be compared to them in order to ascertain that the terms of the contract had been met. These arms were to be proved by the standard test at Richmond at State expense.[6] Mr. Swan's proposals were accepted and a contract was signed for the manufacture of the four thousand stands of arms under the afore mentioned terms.[7]

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4. Calendar of Virginia State Papers (Richmond: H. W. Flournay, 1890), VIII, pp. 356-7,380, 388.

5. Ibid., p. 389. 6. Ibid. 7. Ibid., p. 460.

During this period, arms were secured from a variety of sources. This can be seen in the variety of arms used in a test of arms in 1806. Included in this group were Charleville (French Army), Wheeler, McCormick, Miles, Haslett, and British Tower muskets.[8] The problems of maintaining and supplying ammunition to so diversified an assortment of arms can scarcely be minimized. This assortment is the most striking proof that there was no one reliable source of arms available to the State.

It was at this time that the State decided to rid itself of this dependency upon external sources for its arms. There was also the secondary reason that this would develop more skilled mechanics in Virginia, something which was sadly lacking up to this time. To carry out this policy the Virginia Legislature passed, on January 23, 1798, "An Act to establish a Manufactory of Arms." Paragraph seven of this Act stated:

> And to insure a supply, Be it further enacted, that the executive be empowered to establish a manufactory of arms[9] within the vicinity of Richmond, at such place, and upon such terms and conditions as to them may seem expedient.[10]

The Governor, in February of 1798, called upon John Clarke, a capable but very controversial Virginian to furnish them, "with a plan for a complete manufactory of arms to be erected in the vicinity of Richmond,

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8. Council Journal (December 3, 1806 to December 1, 1808), (MSS in Virginia State Library), p. 119.

9. Author's Note: The terms, Virginia Manufactory of Arms, State Armory, and Richmond Armory are used interchangeably in this paper.

10. Samuel Shepherd, The Statutes at Large of Virginia (Richmond: S. Shepherd, 1835), II, 87.

capable of the annual manufacture of four thousand stands of arms."[11] Mr. Clarke set about his task with earnestness and energy. He first visited all of the large arms manufacturing establishments in the North noting the weapons produced, methods of production, etc. He paid special attention to the large United States' Armory at Springfield, Massachusetts, then the largest and most efficient armory in the United States.[12] Then he drew up plans for the Armory which were based on the most acceptable features of the establishments visited. These plans were accepted by the governor, and Clarke then made arrangements for their construction.[13] He selected a site in what was then the west end of Richmond, on the south side of the James River Canal.[14] It consisted of a plot containing six acres, one rood and seventy-two poles of land owned partly by Mr. Samuel Overton and partly by Colonel John Harvie.[15] Colonel Harvie was paid three hundred pounds for his property[16] while Mr. Overton received $833.67 for his property.[17] Mr. Clarke's plans for the Armory were quite extensive with all the plans made with the expectation of further expansion. His plans foresaw the production of sixteen stands per day (4,992 per year), six pistols per day as well as seven swords per day. The works at

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11. Calender of Virginia State Papers, IX, 208.

12. Ibid.,~~IX, 208~~

13. Ibid.

14. Author's Note: The site today is located at the foot of Fifth Street in downtown Richmond.

15. Calendar of Virginia State Papers, VIII, 455. 16. Ibid.,p. 462.

17. Journal of House of Delegates (1853-4), List of Appropriations; Armory at Richmond, Doc. 55, p. 13.

full capacity would employ 151 workers, who after gaining experience, would further increase production. He placed water storage facilities in the cupolas of the buildings to be used in case of fire. A guard-room was to be maintained with guards on duty at all times. This guard duty was to be performed by the artisans employed at the works. They were to be enlisted for a period of three years, and their dress was to be uniform.[18] They would receive some soldier's training.

This site had many distinct advantages, it was in a valley leading to the James River, thus convenient to both land and water transportation. The site was also very favorably situated as to water power facilities. It had very suitable locations for the various buildings of the works: the boring mills, foundaries, furnaces, etc. It was sufficiently distant from the city that an explosion wouldn't endanger lives. It was also out of the reach of the floods of the James. There was also the possibility of clay suitable for bricks being available on the grounds. The proximity of the Armory to the Penitentiary meant a readily available source of cheap labor. At various points along the canal were located the raw materials necessary for the manufacture of arms: iron, copper, mineral coal, and charcoal. At other points were found the different types of timber necessary, such as black walnut for stocks, and willow trees used in making a type of charcoal necessary for the manufacture of gunpowder.[19]

Construction was begun on the Armory late in 1797, and by March 28, 1801, Mr. Clarke was able to report to the Governor that the Armory

18. Calendar of Virginia State Papers, IX, 208.

19. Calendar of Virginia State Papers, VIII, 455.

"probably would be ready next year".[20] He went on to note that they should probably send abroad at that time for such articles as vices, bellows, and files which could be purchased at lower rates and of better quality overseas. In this same message he reminded the Governor of the gentlemen's agreement between himself and the previous Governor that he would be appointed Superintendent of the Armory upon its completion for three hundred pounds per annum and Superintendent of the Penitentiary for one hundred pounds per annum.[21] Shortly after this, he took a trip through the Mid-Atlantic and Northern states in order to secure artisans to work in the Armory upon its completion. His travels first took him to Tanney Town, Lancaster, and Philadelphia, the arms manufacturing centers of Pennsylvania. At Philadelphia, an Irish immigrant, Mr. Haslett, was recommended to him as an Under-Master Armourer. Mr. Haslett had taken over the unfinished contract, materials, and employees of a Mr. McCormick, and Mr. Clarke made arrangements to keep his working force together so that if other workmen could not be found at more advantageous terms further north, he could hire them on his way south.[22] He made no definite commitments though because wages were generally lower in Massachusetts and Rhode Island.[23] While in Philadelphia, he purchased the necessary tools for the Armory from a Mr. Hodgson, an iron-monger of Birmingham, England, at a cost of seven thousand dollars.[24] In his letters he noted that it was very difficult for him to secure workmen in the vicinity of Springfield, Massachusetts. It seems that

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20. Ibid., IX, 232.
21. Ibid.
22. Ibid., p. 236.
23. Ibid., p. 242.
24. Ibid., pp. 205, 268.

certain parties were spreading untruths and saying that his mission was part of a plan to move the United States Armory from Springfield, thus throwing a good many local citizens out of work.[25] He secured a number of workmen in the New England States and on his return to Philadelphia hired Mr. Haslett and the remainder of his force. Mr. Clarke had suggested George Williamson, an outstanding Virginia gunsmith, for the post of Master Armourer, and his suggestion was carried out. On December 4, 1801, Mr. Williamson wrote the governor acknowledging his appointment as Master Armourer at two hundred pounds per year but stated that this salary was far too small to support his family and so he must refuse. He went on to note the abilities and character necessary for a Master Armourer and suggested that a man possessing these characteristics and experience could more than make a living in his field.[26] Though no records have been found to verify it, the Governor must have heeded his statements, because soon afterwards there is a letter from Williamson to the Governor referring to himself as the Master Armourer of the Armory.[27] It was on this trip that Clarke visited for the first time the Cannon Foundry of Henry Foxall of George Town. This was the largest and by far the most efficient manufactory in the United States and equal to any establishment of its type in the world. Clarke was very impressed with the plant and brought back the suggestion to the Governor that a plant similar to this be included in the Armory. His recommendations must have made a

25. Ibid., p. 249 26. Calendar of Virginia State Papers, IX, 257.

27. Ibid., p. 251.

favorable impression on the Governor because in October, 1801, he wrote Mr. Foxall that the Governor wanted to introduce his methods of making cannon into the Armory.[28] There followed a long series of negotiations which ended with Foxall agreeing to furnish the plans and supervise the installation of machinery and other things necessary to the placing into operation of his method of cannon manufacture.[29] Mr. Clarke was consistant in his desire to make Virginia self-sufficient in the production of arms. He suggested that all apprentices at the manufactory be young Virginians so as to insure a steady source of mechanics skilled in the manufacture of arms.[30] At various times he continued to suggest that young Virginians be used as apprentices and that they be apprenticed on the terms as if they were apprenticed to private individuals (i.e. they would be furnished food, clothing, and a certain amount of education). In one letter, he noted that this would diffuse this knowledge throughout the state thus creating a class of skilled mechanics. He was also quick to point out the advantages of the armory: a uniform arm, arms superior and more economical than regulation United States' arms, and a reliable source of arms whose facilities were annually checked by the Legislature. Another paramount advantage, according to Mr. Clarke, was the retention of capitol within the state which tended to encourage production within the state.[31]

The task of constructing the Armory was a lack of funds due to a sometimes hostile and always frugal Legislature. The Armory was in

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28. Ibid., p. 248. 29. Ibid.

30. Ibid. p. 292. 31. Ibid., 430.

linited operation as early as October, 1802,[32] and by October, 1803, it had completed 2,151 muskets.[33] However, in May, 1803, Mr. Clarke had to report that "operations were suspended for the present year due to lack of funds".[34] Though Henry Foxall had been engaged in 1801 to plan and install machinery used in the manufacture of cannon, the Foundry and Boring Mill were not finished and in production so as to carry out the terms of his contract until June 29, 1809.[35] Work was delayed for sometime until March of 1806, when Major Clarke was, "authorized to proceed with the completion of the Foundry at the Manufactory of Arms, keeping within the appropriations for that purpose."[36] By 1809, with the completion of the Foundry the Armory had cost the State of Virginia in the neighborhood of $133,000.00 (excluding operating costs such as labor and raw materials.), a considerable sum in those days.

As early as 1804, the Armory was one of the sources of local pride and considered as a "must" for visitors to see. A Mr. William T. Barry wrote in a letter to a friend a description of his visit to the Armory.[38] He was very impressed with its magnitude and scope.

Because one of the plans of the unsuccessful "Gabriel" Insurrection in August 1800 was the seizure of the State arms stored

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32. Ibid., p. 324. 33. Ibid., p. 372,

34. Ibid., p. 355. 35. Ibid., X., 69.

36. Ibid., IX, 473.

37. Documents of House of Delegates(1853-54), List of Appropriations-Armory at Richmond(1798-1822), No. 55 (Richmond: State Printer, 1855), pp. 13-14.

38. William T. Barry, "Letters of William T. Barry," The William and Mary College Quarterly Historical Magazine, VIII(July 1904-1905), 115.

at the Arsenal in the Penitentiary and later at the Armory, there was always concern that these arms be properly safeguarded.[39] To assure the safety of these arms the Public Guard of Richmond was formed. This was a corps of men who were paid by the city. Their duties were to guard the arms and other munitions of war in the Armory to serve on duty near the capitol, and to guard the Penitentiary. They wore a uniform like that worn by members of the Regular Army and were commanded by Regular United States' Officers.[40]

In 1807, Mr. Clarke had a pamphlet entitled "The Superintendent of the Virginia Manufactory of Arms to the Governor" published. In this he gave an extensive report of the operations of the Armory. It is not improbable that copies of this pamphlet were given to members of the Legislature to win or insure their support for the Armory. In the booklet he wrote that each musket cost the State $10.28 7/10 per piece and with bayonet the cost was $10.86 5/10.[41] A pistol for the Cavalry cost $7.52 while a rifle's cost of manufacture was $17.03 6/10.[42] He compared Armory weapons to those manufactured for the United States' Government. The United States' weapons cost $13.50 per stand as compared to $10.87 per stand for the Manufactory arms. He also considered Armory weapons to be superior to the United States' arms.[43] He described the organization of the plant with

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39. Calendar of Virginia State Papers, IX, 140 X 57.

40. Julia Cuthbert Pollard, Richmond's Story (Richmond: Richmond Public Schools, 1932), p. 76.

41. John Clarke, The Superintendent of the Manufactory of Arms to the Governor (a pamphlet) (Richmond: 1807 (1806) p. 3.

42. Ibid., p.4. 43. Ibid., p. 11.

workers concentrating on a specific phase of operations enabling them to become very proficient in this one phase of production. Where it tended to increase production the workers were paid on the basis of production(piece work).[44] He enumerated once more the advantages of having a state Armory such as a reliable source of arms, economy of production, etc.[45] He reported that 1265 muskets with short bayonets and 205 with long bayonets had been produced. Five hundred and seventy-nine pistols and a number of swords also had been finished.[46]

Early in 1809, Mr. Clarke was removed from his post as Superintendent of the Manufactory of Arms.[47] His dismissal was the climax of a long standing antagonism against him by the Legislature(or certain members of it). He was attacked on various issues for sometime before his actual dismissal. Once a wall fell down during the construction of the Armory, and there were many questions raised as to his competence in his job. He wrote a letter defending his character as an architect and Superintendent. In this letter he stated that the work in question had been executed by a company which had been hired over his protests. He had recommended a certain workman of established reputation, but the contract had been granted to some other workmen who had placed a lower bid.[48] In 1808 he was again under fire, this time in the form of rumors regarding the

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44. Ibid., p.10. 45. Ibid., p.12. 46. Ibid., p.7.

47. Author's Note: There is no information available as to the exact date of his dismissal. In Calendar of Virginia State Papers, X, he is referred to as Superintendent of the Armory in March, but not so on May 9.

48. Calendar of Virginia State Papers, IX, 258.

quality of arms being manufactured at the Armory. A member of the Council, Mr. McRae, reported that rumors were being circulated to the effect that Virginia Manufactory of Arms' weapons were defective and "so liable to burst as that the ordinary use of them is unsafe."[49] He recommended that the Governor investigate as soon as possible and to more fully achieve this end, He suggested:

1. The arms at the Armory be generally examined.
2. They be compared to French arms, Wheelers, McCormicks, Miles, Hasletts, British Tower muskets, and those of the Manufactory for each year from its foundation. Twenty of each kind shall be proven and the proof first used shall be repeated to all of them.
3. The powder and ball to be used in proving the arms aforesaid shall be proportioned to the size of the caliber of arms respectively so to be proven.
4. The mode of proof shall be the same with that used in the armories of the United States as mentioned in the letters of the Secretary of War of the 15th and 29th of March,viz., each barrel shall be discharged twice the first time with 1/18 lb. of powder, the second time with 1/20 of a pound and a ball of the same size as before.[50]

The Governor and Council resolved that the Superintendent be ready to comply with the before mentioned instructions and noted that they would attend the testing of the arms.[51] The Commission to examine the arms at the Armory reported on Saturday, July 23, to the Governor and Council. They reported that all arms stood the proof except the Model 1804 which had a light barrel and was made of brittle iron. They stated that many improvements had been intro-

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49. Extract from Minutes of the Council, June 3, 1808, and The Commissioners to the Governor of Virginia, July 23, 1808(MSS, Virginia State Library), 119.

50. Ibid. 51. Ibid.

duced since 1804, and they considered the new muskets superior to any other musket now in use. They suggested the possibility that many of the failures resulted from excessive proofs. Even the 1804 Muskets stood up well under the proofs used at the time of their manufacture and were still quite serviceable. They suggested several improvements in the manufacturing process or in general policy. These were:

1. Great care should be used in selecting iron, it should be soft and malleable.
2. Very long bayonets will probably be inconvenient in service.
3. Pistols were well executed but too large, suggested complete uniformity with United States' arms, rifles can already use United States' cartridges.
4. They suggested that more sizes of swords be constructed so that they could be more easily used by various sized individuals. [52]

Their overall impression of the Armory was very favorable. They considered the machinery well-designed and executed, and the division of labor judicious and proper, not only causing great savings in expense, but facilitating an exact uniformity of parts. They considered the Officers and Superintendent of the Armory very zealous and capable.[53] Despite this complete exoneration, Mr. Clarke was soon afterwards removed from his position.

John Staples took over as Superintendent and continued the operation of the Armory.[54] He reported to the Governor that 525 muskets, 100 pistols, 175 cavalry swords, and 75 artillery swords were manufact-

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52. Ibid. 53. Ibid.

54. Author's Note: Though Superintendent as early as 1809, the official bond of John Staples as Superintendent of the Armory in penalty of fifty thousand dollars was not tendered until 18 February, 1811.

ured from March to April ,1809.[55] In July of the same year, he requested permission to sell castings to private individuals in order to train his workers and to help defray costs of operation at the Armory.[56] Mr. Staple's tenure of office was no more peaceful than that of his predecessor. In 1812, Governor Barbour reported to the Council about certain complaints on the arms manufactured at the Armory. His report stated that the general appearance of the arms inspected was good, indicating that they had been well cared for. Upon closer inspection, flaws indicative of brittle and unmalleable iron were noted. It was also stated that Armory weapons were always at fault this way, but French weapons were not. Also, the troops wanted the cock changed to the French type. The Governor had ordered the weapons proved, and a gun-maker was to inspect and repair the defective cocks.[57] Despite these incidents, the Armory was to provide the bulk of the arms used by Virginia forces in the War of 1812 and to enhance its reputation to such an extent that the Secretary of War sent a letter to the Governor to discuss the possibility of the Armory furnishing muskets and rifles to United States' troops and if the weapons could be furnished and on what terms and at what rate they would be delivered.[58] In 1815, John Staples sent a request to the Governor as to the number and type to be manufactured so that the necessary arrangements could be made. He said that the Foundry and Boring Mill were a dead expense to the

55. Calendar of Virginia State Papers,X,49.

56. Ibid.,p.96. 57. Ibid.,p.137.

58. Ibid.,p.401.

State unless cannon were wanted either by Congress or the Commonwealth, and if not, operations should be suspended. He also mentioned that there were several thousand inferior muskets stored in the Armory which were useless to keep. He suggested that they might be sold, possibly in South America.[59] A subsequent report, presented in December,1816, for the year as of November 30, stated that the Armory manufactured 204 rifles at $17.50, and 4,104 muskets at $11.50. There were 4,300 muskets and 361 rifles also repaired during this period. As the costs of operating the Fourndry and Boring Mill dropped from approximately $10,000 in 1815 to $709.55 in 1816, it may be supposed that Mr. Staples' advice was followed. In the same report, a letter from George Williamson, still Master Armourer, was presented; he was still protesting that his position was underpaid.[60] In 1818, the water flowing from the Foundry and Boring Mill was leased to a private concern definately ending the operation of these parts of the Armory.[61] The Armory continued a reasonable rate of production until the first of January ,1822,when, under the provisions of an Act of the House of Delegates of March, 1821 it ceased production. This Act provided that,"on the 1st of January next, the operations at the Manufactory of Arms shall cease, and all the Officers and Artificers therein be thenceforth discharged."[62] Apparently John Staples was also relieved of his post at the same time. The position of Superintendent

59. Ibid.,p.422.

60. Journal of House of Delegates(1816),Report of the Superintendent of the Armory pp.57-60.

61. Journal of House of Delegates(1823),Report of the Armory Committee,pp.130-135.

62.Documents of House of Delegates(1853-54),List of Appropriations, Armory at Richmond,Document 55, p.13.

of the Armory and Captain of the Public Guard stationed at the Armory, were apparently merged because for sometime hence these jobs were held by the same man.

63. Author's Note: It is possible to document that Mr. Staples was Superintendent as late as January, 1821, and that he was Superintendent of Public Edifices in December,1823. As early as July, 1823, another man, Captain Bolling was listed as Superintendent of the Armory.

## CHAPTER II

## THE PERIOD OF INACTIVITY(1822-1859)

The period between 1822 and 1859 was a very uneventful one in the history of the Armory. It became no more than a storehouse and place of repair for the State's supply of weapons. In addition it also served as a barracks for the Public Guard. It was a far cry from the thriving manufactory envisioned by John Clarke. During this period, it was always a question of fighting decay rather than expanding. Also, during this period an arsenal was established at Lexington which divided the State's arms supply and further lessened the Armory's importance.

As early as 1823,The Armory Committee reported that there was a pressing need for repairs upon the Armory buildings. This was especially true in the Foundry and Boring Mill where the water leased to a private concern in 1808 had backed up from its dam at various times and had caused considerable damage to the foundations. The Committee recommended that the lease of water be broken, and the buildings be leased to a private concern with the stipulation that the occupant repair the buildings and keep them in a good state of repair while they retained them.

A year or so earlier, the Legislature had enacted a bill which provided that the arms stored in the Armory be cleaned and packed in special boxes as was done in the government armories.This would aid in their preservation and enable them to be placed in the

hands of the Militia with a minimum of time and effort. Captain Blair Bolling, the Superintendent, reported that nine months had been spent so far in this operation, and at least nine more months would be required.[1] On February 10,1834, The General Assembly of Virginia empowered the Superintendent to lease for a term of not exceeding ten years the Armory Boring Mill and surplus water power, finally carrying out the recommendations of the Armory Committee.[2]

Captain Bolling acted as Superintendent of the Armory until 1839. During this same period he was also Captain of the Public Guard His report of operations up to the thirtieth of November of that year shows how much the Armory-had fallen into disuse. He reported five hands employed at repairing muskets. They had repaired, repolished, and repacked 520 muskets and had repaired an additional 805 without repolishing or repacking them.[3]

Captain Bolling was replaced by Mr. John B. Richardson who served as Superintendent of Public Edifices as well as Superintendent of the Armory.[4] During this period there was much agitation for the establishment of a State Armory School. This was to be a regular military school giving a standard college course. The proposed school, as described in Bill No. 75, of July 14, 1843, was to be quite an elab-

1. Journal of House of Delegates(1823),pp.130-135.

2. Acts of the General Assembly of Virginia, February 10.1834.

3. Journal of House of Delegates(1839), The Report of the Superintendent of the Armory,pp.58-60

4. Journal of House of Delegates(1840), pp.143-47.

borate one. This Bill provided that the Public Guard be disbanded and that the Cadets at the School carry out its present functions. It also set up a Board of Visitors and a Faculty and outlined their various functions. It prescribed that there would be two types of Cadets, Regular and Irregular. The Regular Cadets were to be selected by their local School Commissioners and later screened by the Board of Visitors. The Boards of Visitors then would select as many as possible with a fair representation from each part of the State. These Regular Cadets were to serve for a term of not less than two years and not more than three. The Irregular Cadets would pay their own expenses. There would be an allotment of twenty thousand dollars a year for operating expenses. The Bill also made provisions to provide additional teachers for the State when it stated:

> Be it further enacted, that previously to the admission of any youth into this school State account, he shall be required to pledge himself in such mode as the said Visitors may appoint, to teach in the Common Schools of the State for the same number of years for which he was a student of this school,unless excused for some good cause by the Board of Visitors. 5

However, for various reasons the School was not established in Richmond but at the Lexington Arsenal and soon was to become known as the Virginia Military Institute.

Captain Charles Dimmock became Superintendent of the Armory in 1844 and served at this post, and as Captain of the Public Guard, until 1861. He then became Chief of Ordnance for the State of Virginia. Upon taking up his new duties. Captain Dimmock found that he had a good deal of leisure time on his hands, so he looked around for a

5. A Bill to establish the State Armory School(Virginia House of Delegates),14 July 1843, Bill No. 75. pp.1-4.

profitable venture ot occupy his leisure time. He settled upon the idea of manufacturing nails in part of the Armory. By 1845, the Boring Mill and its water power had been freed by the expiration of the leases on them, and Captain Dimmock had secured the financial backing of a Mr. Osborne. The Mill was leased to Mr. Osborne on June 17,1846. Mr. Osborne brought in Mr. William H. McFarland and Mr. Hardwell Rhodes to provide additional capital and shortly afterwards, Mr. Anderson, the owner of the Tredegar Works, was added to the group to serve as Chairman and to plan the new business. On March 13,1847,the Armory Iron Company was charted. By this time, Captain Dimmock had lost all voice in the organization and had become quite disgruntled. In his capacity as Superintendent of the Armory, he made the most of every opportunity to hinder the progress of the company,resulting in a number of serious quarrels.[6]

6. Bruce,Op. Cit., pp. 215-217.

## CHAPTER III

## THE PERIOD OF REVIVAL (1859-1861)

The years between 1840 and 1860 were eventful ones in the development of military firearms. This period saw the perfection of the percussion cap to the place where it was sufficiently dependable and economical to be placed in the hands of large bodies of troops. This improved percussion was soon joined by the Minie ball which required a rifled barrel but which was capable of vastly improved accuracy and ease of loading. Though such improvements seem insignificant to us today, its effect upon the military situation of the time was striking. First of all, it marked the first marked change in military firearms for over one hundred and fifty years. It increased the accuracy and volume of fire of the individual soldier tremendously. It caused a change in military tactics from fighting in formations in the open to the type of fighting we know today.

By 1859 with the ever increasing tensions between the North and the South, Virginia began to realize how this revolution had robbed her of her ability to defend herself. The thousands of weapons in the Arsenals and in the hands of Militia organizations were no better than useless. To send troops armed with them against troops armed with the new Minie rifles would be like asking them to commit suicide. The situation was made worse by the fact that there was no place in Virginia capable of manufacturing these new rifles in the event of an emergency.

By the time the Legislature met in December of 1859, there was considerable pressure for the State to provide itself with a reliable source of these new weapons. The ends were generally the same; the ideas on how to accomplish them differed considerably. On December 16, 1859, Major Hartly presented a plan to the Legislature designed to supply the arms. He wished to organize a corporate company with a capital of five hundred thousand dollars which would later be increased to one million dollars. He would then restore the Armory and expand it so it would be able to produce five thousand rifles per annum at a cost of two hundred and fifty thousand dollars, and an additional fifty thousand dollars would enable the Armory to double its production.[1] A letter from the President of the James River and Kanawha Company received at the same time offered a different alternative. He suggested a different site, Jordan's Point, which was adjacent to the town of Lexington and very near to the Virginia Military Institute. He pointed out that it was very near the center of the State and thereby inaccessible to an invading enemy. He noted that it was located on several important transportation routes and there was an abundance of raw materials and water power available nearby. He stated that his Company already possessed considerable buildings and equipment there which it would supply to the State at a reasonable price.[2] The report by the Committee sent to inspect the Armory was encouraging. They reported that the Armory buildings and sites were in good condition though the interiors would have to be remodeled to

1. Senate Journal and Documents (Va. 1859-1860), Doc. 7, pp. 5-7.

2. Ibid., Doc. 8, p.1.

accomodate the necessary machinery. They estimated that it would take thirty thousand dollars to remodel the interior and seventy thousand dollars to purchase the machinery necessary to manufacture five thousand rifles per annum. An additional seventeen thousand dollars could purchase the machinery necessary to double production. They estimated that it would cost sixty thousand dollars to produce five thousand rifles per annum and for one hundred thousand dollars, the Armory could manufacture ten thousand rifles. They based these figures on the basis of one hundred employees of the Armory.[3]

By January 21, 1860, the issue had been decided. On this day an Act of the General Assembly entitled, "An Act Making an Appropriation for the Purchase and Manufacture of Arms and Munitions of War," was passed. One provision of this Act reas as follows:

> 1. Be it enacted by the General Assembly that the Governor be and he is hereby directed to have the buildings for the Public Armory at Richmond forthwith put in such condition by the introduction of suitable machinery and otherwise, as shall fit them for the manufacture and repair of arms for the use of the Militia of the State upon a plan proposed by a Commission of three persons and approved by the Governor, the members of which Commission shall be appointed by the Governor and removable at his pleasure.
> 2. That the Governor be and he is hereby authorized and directed to employ a Master Armorer, at an annual salary not exceeding twenty-five hundred dollars and quarters, whose duty it shall be to direct the operatives in the Manufacture and repair of arms: and under the direction of the Superintendent to employ such operatives as may insure the effective working of the Armory.
> 3. That the Governor be and he is hereby authorized and directed to purchase or cause to be purchased all such machinery, implements and materials and the patent rights of any newly invented arms as may be necessary

3. Ibid., Doc. 20, pp. 5-6.

for the purpose herein specified.[4]

Captain Dimmock was ordered to have a plan of the Armory prepared by a competent person for use by the members of the Commission. The members of the Commission as appointed by the Governor were Colonel Philip St. George Cocke, Colonel Francis H. Smith and Captain George W. Randolph. Colonel Cocke was elected Chairman of the Commission at its first meeting. The Commissioners then proceeded to Washington and Harpers Ferry as quickly as possible. They went to Washington to secure arms and information and to Harper's Ferry to visit the large Government Armory there.[5]

The Commission spent the Spring and Summer deciding what concern was going to build the machinery and what type of weapons would be manufactured there.

Major R. E. Carlston of the Virginia Military Institute conducted a series of tests to determine what type of shoulder weapons would be more suitable for use by the Infantry and Cavalry and should be manufactured for use by the militia. In these tests he used: A Richmond Armory Piece made in 1819 and converted to percussion but still a smooth bore, a Harper's Ferry Rifle, A Harper's Ferry Rifle altered by Merrill's Patent to a breech-loading system, a Burnside's Carbine, a Smith and Poultney's Carbine which used an india rubber cartridge and a Maynard Rifle. Several of these weapons were eliminated almost immediately because of their cost, complexity, or

4. Record of the Proceedings of the Board of Commissioners Appointed under the Act of the General Assembly of Virginia, passed January 21st 1860 entitled "An Act making an appropriation for the Purchase and Manufacture of Arms and Munitions of War." (MSS Virginia State Library) p.1.

5. Ibid., p.3.

fragility. After extensive testing, he arrived at what he considered to be an ideal infantry weapon. It should be similar to the Harper's Ferry Rifle Musket, with its barrel shortened to 38 inches and the barrel's weight increased so that the weight would remain the same. The bands would be similar to those on English muskets, and the Maynard primer attachment was to be eliminated. The Harper's Ferry Ball was to be retained and the weapons were to be of the same caliber as United States' Muskets. For the cavalry and certain selected infantry non-commissioned officers, he recommended a carbine equipped with the Merrill's Patent so as to be breech-loading. He believed that these weapons would be cheap, sturdy, and simple to operate. Since they could use both paper cartridges and loose powder and balls, they would present no ammunition problems, as was the case with the other breech-loaders tested.[6]

During the same period, Mr. P. Burkhardt had visited, and helped to conduct a series of tests on revolvers. As an outcome of these, he recommended that a revolver produced by Dean and Adams be adopted as standard for Virginia troops.[7]

After many negotiations, the contract for the manufacture of the machinery needed to equip the Armory was given to Mr. Anderson of the Tredegar Works. Some time previous to this a contract had almost been concluded with the Chicopee Manufacturing Company of Chicopee Falls, Massachusetts. Mr. Ames, the owner, was one of the largest contractors with the United States' Government and had acquired an excellent reputation for workmanship while dealing with them.[8]

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6. Ibid., pp. 38-59. 7. Ibid., 68,

8. Ibid., p. 30.

The Commissioners stated that their reason for giving the contract to Mr. Anderson was based on a long standing state policy of encouraging its own artisans and mechanics. They also spoke of the excellent reputation which Tredegar Works had acquired since Mr. Anderson's acquisition of the works. They told how he had inaugurated the manufacture of cannon for the United States' Government on a large scale with a high degree of success. In addition it was not that Tredegar had recently constructed the Machinery for two large United States' Warships. The Tredegar works at this time was doing a business in the volume of over one million dollars a year, a not inconsiderable sum in those days.[9]

On August 23, 1860, the contract was entered into between the Commissioners and the Tredegar Works. The contract stipulated that Tredegar was to supply, install, and have in operation before the first of December, 1861, the tools necessary for the manufacture of not less than five thousand rifled muskets per annum. The musket to be manufactured was to follow the ideas of Major Carlston combining the features of The Harper's Ferry and Enfield Rifles. The Tredegar works were to set up the machinery, and when five hundred muskets met the required specifications, the work would be accepted and the contract fulfilled. To improve Virginia industry, no sub-letting was to occur unless it was absolutely necessary. In partial payment, Tredegar Works was to accept all the smooth bore muskets which were in good order belonging to the State at the value of $1.50 per piece. However, ten thousand

9. Report of the Commissioners Charged With the Organization of the Armory and Contract Relative thereto, August 20, 1860, (MSS, Virginia State Library).

were to be reserved until five thousand rifled muskets were manufactured.

In December of 1860, the Master Armorer and the Superintendent inspected the grounds of the Armory and reported that some of the land was not necessary at that time and wouldn't be, even after the proposed expansion. They suggested that this land be sold and the funds acquired be used to build a Depot for the Public Arms and a Barracks for the Public Guard. Both of these facilities would be badly needed after the renovation began because additional machinery would take up the space now available for these functions. Captain Dimmock suggested that it would be impossible to maintain discipline in the Public Guard unless they were quartered as a unit, at the Armory.[11]

However, the contract with Anderson was never to be completed. After the Election of 1860, events began to move much too fast for the normal rate of development planned for the Armory. The Government Armory at Harper's Ferry was seized by Virginia Troops under Major-General Harper in April of 1861. Though Union Forces had attempted to burn the buildings, the fires were put out without any serious damage by the Virginia Forces. In a letter to the Governor dated April 19, 1861, General Harper informed the Governor of the situation there and made several suggestions as to how the machinery there would be best used. He reported an interview with a committee representing the workmen at the Armory. During the interview, they stated that it would take several months to remove the machinery and other Public property

10. Calendar of Virginia State Papers, XI,168.

11. Record of the Proceedings of the Board of Commissioners Appointed under the Act of the General Assembly of Virginia, passed January 21st,1860,entitled,"An Act making an appropriation for the Purchase and Manufacture of Arms and Munitions of War,"(MSS, Virginia State Library), p. 70.

from the Armory. He noted that the men were property holders in the community and more concerned for their livelihood than anything else, and therefore probably exaggerated the difficulties. Since these men would be needed wherever the works would be relocated he requested permission to give them assurances of employment. This would win their support and therby aid in the speedy removal of the machinery from such an exposed position. He also suggested that this machinery be placed in the Armory at Richmond, so as to put it in operation as soon as possible.[12]

On April 19, Mr. Michael E. Price was appointed Master of Transportation of Machinery from Harper's Ferry Armory to Richmond and elsewhere. In this position he was empowered to employ such civilians as necessary to carry out that order. On May 25, he received an order to remove the machinery without delay to the Richmond Armory.

In a report, Mr. Price stated that he had boxed the machinery with the aid of a number of the local inhabitants. He then had transported the machinery to the W. & P. R. R. Company at Harper's Ferry and then supervised its shipment to Winchester and Strasburg. In his report he described the machinery which had been captured there by State Forces. The State had gained a vast amount of valuable machinery,tools, and appliances necessary for the manufacture of the Minie Rifle, with sword-bayonet and the Rifle Musket. Also acquired were the tools and machinery for the alteration of the Old Model Flint-lock Arm of 1842 to the percussion principle. In addition, the State also secured the means necessary to supply them with the am-

12. Calendar of Virginia State Papers, XI, 175.

munition and appendages. A fortunate circumstance for the State was the capture of sixty thousand gunstocks of black walnut which had already been seasoned. At this time, there existed no practical means of artificially seasoning stocks, so it was necessary to season wood from three to four years to obtain a proper stock. It is ironic that in the South with its vast forests there was always a critical shortage of proper timber necessary for stocks. Any inspection of a collection of Confederate firearms, especially those manufactured in the latter years of the War will reveal a number whose stocks are cracked because they were manufactured from green timber. Mr. Price stated, with great truth, that without these stocks, a first-rate arm couldn't be manufactured for years. He noted that unfortunately, quite a few of those stocks and some parts had been destroyed by the fires set by Union Forces.[13]

The Armory was in operation before the installation of the machinery from Harper's Ferry, though it was only occupied in the renovation and issurance of war material. The Superintendent reported that the Armory issued, from April 1st to June 14,1861, 2054 rifles and carbines, 562 pistols, 28,850 flint muskets, 11,636 altered percussion muskets and 4,118 original percussion muskets.[14] In a subsequent report, he reported that the Armory had issued forty rounds of ammunition per man for fifty thousand men and 43,658 muskets, rifles and carbines plus 115 pieces of artillery.[15]

The Superintendent reported that Soloman Adams, the Master Armourer, had been sent North just prior to the outbreak of hostilities

13. Ibid.,pp.180-181. 14. Ibid.,pp.165-66.

15. Ibid.,p.175.

to buy arms, tools, and other necessary items. However, secession had come too soon and Mr. Adams was forced to return in the disguise of a common laborer to avoid detection and capture.[16]

Colonel James H. Burton replaced Captain Dimmock as Superintendent of the Armory. Colonel Burton had had an outstanding career before coming to the Armory. He had been employed at a number of armories and had taken part in the erection of the works at Enfield, England which were then producing the Enfield Rifle, undoubtedly the best weapon of its type in the world. He was an extremely well educated machinist, and his able leadership undoubtedly enabled the Armory to be in production a number of months before it would have under less capable leadership. Prior to this, he had been employed by the Tredegar Works where he was to superintend the placement of the machinery under construction there for the Armory, so he was intimately acquainted with the problems of the Armory before his employment there.

It was decided that the machinery for making the Rifle Musket of 1855 was to be rushed to Richmond and installed in the Armory while the equipment necessary for the manufacture of the Minie Rifle was to be turned over to the State of North Carolina for installation in certain buildings of the former United States' Arsenal at Fayettville, North Carolina. This site was selected because of the abundance of power available there.

The addition of the machinery for the manufacture of the Rifle Musket in addition to that already supplied by the Tredegar Works made the Richmond Armory potentially the largest and best equipped factory in the South for some time to come. Though the transferral of the

16. Ibid.

machinery from Harper's Ferry began in the latter part of April, it was to take until August to get the Armory into actual manufacture. The transfer of the machinery had to be accomplished rather hastily, and the last of the equipment was taken out under fire so the shipment was not carried out in an orderly manner. This resulted in a number of lost and misplaced parts and caused a general confusion which took some time to unravel. It took some time to locate and reassemble the sets of machinery, and much time was consumed in the replacement of the lost parts. Also, the machinery from Harper's Ferry had to be integrated with that produced by Tredegar to form a smooth working production system within the Armory which also took a great deal of time and planning.[17]

In July of 1861, there was a proposition advanced to remove certain of the machines from the Armory to equip other armories throughout the Confederacy. Colonel Burton took strong exception to this and stated his objections in a letter addressed to the Governor and dated July 20,1861. He noted that though there seemed to be certain machines which were duplicates and could be removed without any serious damage, they were, in reality, a very important part of the overall production system. Their removal would upset the whole production process and throw the whole system out of order. This resulting disorder, he believed, could reduce the plant's overall production as much as one half since the machinery at that time comprised a complete set which was capable of producing fifteen

17. General Josiah Gorgas,"Notes on the Ordnance Department of the Confederate Government," Southern Historical Society Papers,XIII, (July to December,1884),pp.70-86.

thousand arms per annum, he strongly recommended that the set not be broken up.[18]

Under Colonel Burton's able direction, the Armory was already in production when the State of Virginia turned over the Armory to the Confederate Government in August of 1861.[19]

18. Calendar of Virginia State Papers, XI, 509.

19. Journal of the Senate(1863-64), Document No. 3, p.7.

## CHAPTER IV

## THE PERIOD OF THE CONFEDERACY(1861-1865)

The contribution of the Armory to the South's war effort during the first year of the war can hardly be overestimated. During this period it was the only reliable source of modern firearms available and functioning. Though the South had seized sizeable quantities of arms in the various United States' Depots and Arsenals, a goodly amount of them were of dubious quality. Quite a few were found to be in very poor condition and the bulk of them were obsolete when compared with the more modern type of Minie rifle. Only a small percentage were rifled, and some were still using the flint lock ignition systems. Although the South had belatedly made a number of contracts with Northern manufacturers for arms and manufacturing equipment, secession came so suddenly that few of these contracts were even completed in part. Also, the South had sent a number of agents to Europe to purchase arms and supplies, but it took some time to purchase these arms and to transport them to the South and get them into the hands of Southern Troops: It was some time before the Confederate Ordnance Department was receiving shipments of these arms regularly. Therefore it is easy to see how valuable the Armory was to the Confederacy during this period and why the Confederate Government accepted it so readily when the Virginia Legislate offered to turn it over to it. The Armory meant more than a place of manufacture of new firearms during this period. Closely allied with the Confederate Arsenal which was located adjacent to it, it was to put in working order the

vast number of arms salvaged from the battlefields of Virginia.

Though a number of arms manufacturing establishments were to spring up all over the South, their overall production was to be negligable. These plants were usually hindered by a lack of skilled operatives and material which usually limited the quantity and quality of their production. In a number of cases when production was underway at these plants it had to be stopped and the facilities moved because of an advance of the Union Army or the appearance of Union raiding parties.

The Armory at Richmond, on the other hand, had ample machinery through advance preparation and capture and also secured the services of a number of the former employees of the government armory at Harper's Ferry. The possibility of securing skilled machinists was further increased by the plants being in Richmond which was more highly industralized than the rest of the Southern cities. These factors,plus the Armorys being in production at a much earlier date, lead a number of highly regarded authorities to believe that the Richmond Armory manufactured forty to fifty per cent of all the rifles manufactured in the South during the conflict, a very sizeable contribution indeed.[1]

On June 29th, 1861, during the Virginia Convention, a number of resolutions regarding the Armory were discussed and approved. The Convention recommended that the Governor turn over to the Confederate Government all the supplies and machinery captured at Harper's Ferry for use during the war. They also recommended the turning over of all Public property and munitions of war captured from the United States.

1. Claude E. Fuller and Richar D. Steuart, Firearms of the Confederacy(Huntington, West Virginia: Standard Publications, Inc., 1944), p. 147.

This was subject to an inventory so that a just accounting could be made between the State of Virginia and the Confederate States at the cessation of hostilities. They also desired that the Governor be authorized to turn over the Armory buildings on reasonable and just terms to be used in ~~the~~ housing the equipment seized at Harper's Ferry. After some negotiation, the Governor was authorized to turn over the afore mentioned buildings and supplies if the Confederary would agree to certain specific terms. Virginia was to turn over all confiscated Public property but was to retain the right of possession to all of it. The machinery ordered from Joseph R. Anderson & Company was to be transferred to the Confederacy retaining right of possession. A complete inventory of all transferred property was to be kept so as to facilitate a just accounting at the end of the war.

There were a number of specific conditions attached to the leasing of the Armory. The Confederate Government was to operate the Armory at full capacity and to expand, but Virginia would not be liable to pay the cost of any expansions. The Confederacy was also to receive the right to one hundred and sixty square inches of water under a four and one half foot head at the same annual rate, twelve hundred and eighty dollars, as was paid by the State of Virginia. The was received by the transferral of a contract between the Kanawha Company and the State of Virginia in perpetuity to the Confederate Government. Since the State had leased Robert Archer & Company a basement room in the West Wing to be used as a wheel-house and a grinding mill, certain arrangements had to be made to terminate the lease. The Archer Company agreed to surrender the property in cluded in their lease upon a fair abatement of

their rent. The annual rent was estimated by James H.Burton, the Armory Superintendent to come to the sum of one hundred and eighty dollars annually. This rent was now to be paid annually to the State of Virginia by the Confederate Government. The State of Virginia also reserved the right to store its cannon on the Armory grounds. Finally, the State was to received two thousand dollars per annum in order to provide proper storage space for its arms and munitions. The final deed of transfer was signed on September 2, 1861.[2]

By September 1861, the Armory was producing sizeable quantities of the Confederate Harper's Ferry Rifle Musket, Model of 1855. This was a .58 caliber weapon,55.85 inches in length and weighing 9.90 pounds with bayonet attached. It had a forty inch barrel and an eighteen inch bayonet and was stocked in black walnut. It fired the so-called Harper's Ferry Ball which was in reality an American adaptation of the Minie Ball, which had been designed by a French Army Captain. This had been designed by Colonel Burton while he had been employed as Under Master Armourer at Harper's Ferry.[3]

Unfortunately the complete story of the wartime operations of the Armory is not available because a number of records were lost or destroyed in the partial dismantlement and burning of the Armory prior to the capture of Richmond in April of 1865. The facts that are available to us should make us fully appreciate the ingenuity and determination of our forebearers who performed such achievements in the face of such adverse conditions.

2. Journal of the Senate(1863-64), Document No.3,pp.7-12.

3. The Ordnance Manual For the Use of the Officers of the Confederate States Army(Charleston, South Carolina: Evans & Cogswell, 1863),pp. 170-175.

Though the Armory could have produced as high as five thousand stands per month by working around the clock, it was estimated that production never exceeded fifteen hundred because of an ever increasing shortage of skilled operatives. Many methods were used to increase or maintain the number of skilled workmen, but none had any great degree of success. Too many capable workmen volunteered for service and were killed or incapacitated, thus depriving the South of their skill which was needed so desperately. The South's conscription laws were not altered to protect these skilled workmen until large quantities were drained off into the services where their skills were not put to their best use. One project which proved to be an outstanding failure was the importation of a number of skilled workmen from England. They were imported early in the war and promised their pay in gold. This soon caused difficulties becasue with inflation and scarcity of gold it soon meant that they were receiving phenomenal salaries which soon caused dissention among the Americans employed with them. The Superintendent sought to solve this problem by paying them a normal wage in Confederate currency and banking the difference in gold in English banks. The workmen would not accept this, and soon became difficult to deal with, as a result they were fired and sent back to England, marking an end to the experiment.

The vast number of small arms manufacturers which sprung up also offered serious competition to the Government shops in that they were able to pay higher wages and so woo away a number of workmen.[4] With the increase of inflation, and a breakdown of transportation resulting in numerous food shortages, this became more and more of a problem because

4. Gorgas, Loc. Cit., pp. 70-86.

the smaller works were located in agricultural areas which were very seldom short of food, which proved quite a successful drawing card to a number of employees, especially those with families. General Gorgas reported to James A. Seddon, the Confederate Secretary of War that fifty-five artisans had left the Government Workshops in Richmond betwenn Christmas of 1863 and May, 1864.[5]

Despite these numerous handicaps, the Armory maintained an excellent record throughout the War. General Gorgas reported that ten thousand arms were salvaged from the field at Bull Run, and the battlefields around Richmond yielded an additional twenty-five thousand arms, all of which were cleaned and reconditioned at the Armory. This was a gigantic task in itself, and was, in addition to maintaining production of new arms, a more remarkable feat.

Colonel Burton was in time relieved of his post as Superintendent of the Armory and made Chief of all the Armories in the Confederacy, the best possible tribute for his excellent work in organizing and running the Armory. He was replaced by Mr. W. S. Downing, who served as Superintendent of the Armory from September 30, 1862 to September 30, 1863.[6]

The Armory was placed under the direct supervision of the Confederate Ordnance Department by order of the War Department on January 31,1861.[7] A year later, the Master Armourer's salary at the Richmond Armory was increased to three thousand dollars and he was also to received the quarters and fuel allowances of a Captain of the Infantry.

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5. The War Of The Rebellion: A Compilation of the Official Records of the Union and Confederate Armies(Washington: Government Printing Office, 1902), Series IV, Vol. III, p. 734.

6. Ibid.,II,958. 7. Ibid.,p.379.

This was a sizeable sum, even in the face of the inflation of the time which would make it appear that George Williamson's suggestions of better than a half century before were finally heeded.[8]

After the Armory passed into the hands of the Confederate Government, there is little official information available as was the case when it was in the hands of the Virginia Government. The bulk of the information comes from the writings of certain Confederate Officials and from incidential facts in more inclusive governmental reports.

One such report described the number of arms issued by the Armory from the first of October, 1859, to the first of October, 1864.These issuances included, 399 common pieces, 103,840 muskets, 6,428 rifles, 795 carbines,446 musketoons, 4,4328 pistols and 7,863 sabres. On hand, at the Armory at this time was a score of artillery pieces and nearly nine thousand various muskets and rifles which were being or had been repaired.[9]

In a report released after the War, General Gorgas stated that there were enough facilities under the control of the Confederate Ordnance Bureau in December of 1864 to manufacture fifty-five thousand rifles and carbines, per annum, provided a sufficient force of laborers could be employed. Of this number, the Richmond Armory was capable of manufacturing twenty-five thousand rifles per annum ~~which~~ with a sufficient number of workers, around four hundred and fifty. This shows the preponderance of the Richmond Armory even this late in the

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8. Ibid.,p.64.

9. Colonel Charles H. Dimmock,"Virginia's Contributions to the Confederacy," William and Mary College Quarterly Historical Magazine,XIII(July 1904-April 1905), p. 141.

War.[10]

The Armory continued in production until April the second, when an evacuation of the machinery. This evacuation continued until April the fifth, when the Confederate forces withdrew after destroying the Armory and the nearby Arsenal. The machinery was shipped to Danville but was never set up and put in production again.[11]

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10. General J. Gorgas, " Resources of the Confederacy in February, 1865,"Southern Historical Society Papers,II(July to December, 1876),p.61.

11. J.W.Mallet,"Work of the Ordnance Bureau of the War Department of the Confederate States , 1861-5,"Southern Historical Society Papers, XXXVII(January-December,1898),p.365.

## CHAPTER V

## SYNOPSIS

From its beginning in 1798 until its destruction in 1865, the Richmond Armory was to play a significant role in Virginia history of that era. Its growth or degeneration can be directly traced to the national situation at that time. In a time of national tension, it was expanded, and in times of peace and tranquility it was allowed to fall into partial disuse. Though its part in times of crisis was more striking, its place in the commerical life of the state in times of peace can hardly be ignored either. It kept the arms in the hands of the Militia in working order and kept the State's reserve arms in a state of readiness in order to meet any possible emergency. It served to train a number of young Virginians in the manufacture of arms, and this knowledge was diffused throughout the State by them either in this field or channeled into other forms of mechanical activities. It also served to train a number of men who, with former United States Army Officers, formed the nucleus of the Confederate Army Ordnance Department. In the production of arms, it was to prove an invaluable asset to the Confederacy throughout the War but most especially in the early days of the War.

Its readiness to respond to any emergency is a glowing tribute to the men who planned and designed it and those who served there in these periods.

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