AUG 2 5 1937, 1937

To the Committee on Graduate Study:

I submit herewith a thesis written by Mr. Floyd Neal Penick and entitled "Efforts of the Continental Congress to Promote Manufactures and Domestic Arts in the Colonies," and recommend that it be accepted for nine quarter hours credit in partial fulfillment of the requirements for the degree of Master of Arts, with a major in History.

J B Sanders
Major Professor

At the request of the
Committee on Graduate Study,
we have read this thesis,
and recommend its acceptance.

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EFFORTS OF THE CONTINENTAL CONGRESS TO PROMOTE MANUFACTURES AND DOMESTIC ARTS IN THE COLONIES

A THESIS

Submitted to the Graduate Committee
of
The University of Tennessee
in
Partial Fulfillment of the Requirements
for the degree of
Master of Arts



by

FLOYD NEAL PENICK

August 1937

PREFACE

This thesis is a study of the efforts made by the Continental Congress between September 5, 1774, and March 1, 1781, to promote domestic manufactures in the American colonies. While there was a limited amount of manufacturing in the colonies during the pre-Revolutionary period, the colonists relied chiefly upon importations for their manufactured goods. The non-importation agreements and the war which followed, however, practically stopped the stream of imported commodities, throwing the colonists upon their own resources. Both the Continental Congress and the governing bodies of the various colonies sought to encourage domestic manufactures by granting premiums and bounties upon manufactured goods, and by exempting workmen employed in certain industries from military service. It appears that these measures acted as a rather effective stimulant to manufacturing in the colonies.

I wish to express my gratitude to Dr. J. B. Sanders, to whom I am deeply indebted for suggesting the subject of this thesis, and for the many helpful suggestions which he has given regarding its preparation. I also wish to acknowledge my indebtedness to Dr. S. J. Folmsbee, Dr. William H. Combs, and Dr. Ruth Stephens for their salutary criticisms and advice concerning the preparation of this manuscript.

F. N. P.

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CHAPTER I

CLOTHING

While efforts were made to promote manufactures in the colonies long before the Revolutionary War began, this struggle forced the Continental Congress to exert more strenuous efforts for the encouragement of the production of certain necessary commodities than had formerly been made. These endeavors, however, were largely incidental to the greater work of successfully prosecuting a war. It is probably true that more emphasis would have been placed upon domestic manufactures at this time had the Revolution not occurred. The non-importation agreements, passed because of the Intolerable Acts and similar measures, made such a result almost inevitable.

The series of enactments by which the British Parliament sought to confine the colonies to the production of raw materials, while England monopolized the manufacturing industries of both countries, was one of the outstanding grievances of the American colonies.[1] As early as 1699 an act was passed by Parliament to prevent, under heavy penalty, the export from the colonies, or from colony to colony, of any woolen frocks, woolen yarn,

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1. John Franklin Jameson, The American Revolution Considered as a Social Movement, 82.

or any "Woolen Manufactures whatsoever."[2] This legislation was, of course, harmful to the woolen industry of New England.[3] In 1719 the House of Commons passed a resolution to the effect that "the erection of manufactories in the colonies" tended to lessen their dependence on Great Britain, and in 1732 Parliament forbade the exportation of hats from the American colonies.[4] Restrictions and regulations were also placed on the manufacture of many other commodities in the colonies.[5]

It is not to be assumed, however, that there was no manufacturing in the colonies previous to the beginning of the Revolution. There was a great deal of spinning, weaving, making of nails, pottery, furniture, and other commodities during the colonial period.[6] In 1764 a society for the "Promotion of Arts, Agriculture, and Economy" was formed in New York, and a great amount of effort was exerted toward fostering the manufacture of linen and woolen goods.[7] Large numbers of the colonists agreed to abstain from the use of such articles as scarfs, gloves, and cloth not of domestic manufacture. In order to keep up the supply of wool for woolen manufactures,

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2. Ibid.
3. Ibid.
4. Ibid., 82-83.
5. Arthur C. Bening, British Regulation of the Colonial Iron Industry, 86.
6. Robert Malcolm Keir, The Epic of Industry, in Ralph H. Gabriel (ed.), The Pageant of America Series, V, 13-14.
7. Jameson, op. cit., 84.

most of the people agreed not to eat any lamb or mutton.[8] With the passage of the Stamp Act in 1765, the merchants of New York, Massachusetts, Rhode Island, and Pennsylvania agreed neither to import from Great Britain nor to sell British goods sent them on commission. Patriotic societies of consumers ceased to use British goods and actively promoted home industries.[9]

In 1767, when Townshend proposed his duties on paper, glass, painters' colors, and tea, enthusiasm for domestic manufactures was again revived.[10] Resolutions were made to abstain from the use of velvet, silks, imported hats, and clothing, and many other commodities. The spinning wheel came into renewed use, and "homespun was worn by the wealthiest."[11] At the Harvard Commencement in 1770, the graduating class appeared in cloth entirely of American manufacture.[12]

In 1769 there was renewed agitation against Parliamentary taxes, and the colonies entered into a new non-importation agreement, which was so effective as to cause a decline of nearly two thirds in the sales of Great Britain to the northern colonies.

Another period of active commerce with England began in 1771, only to be ended by two resolutions of the

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8. Ibid., 85.
9. Victor S. Clark, History of Manufactures in the United States, 1607-1860, 215.
10. Jameson, op. cit., 85.
11. Ibid.
12. Ibid., 86.

Continental Congress in 1774 and 1775.[13] The first of these resolutions called upon all the colonies to cease importing British manufactures either directly from that country or from other places, and the second forbade the exportation of American produce, except tobacco and rice, to Great Britain or her possessions.[14] Thus, the stream of manufactured goods which the colonies had formerly imported from England was practically stopped. The need in the colonies for manufactured goods became "extremely intense."[15] The colonists were thrown upon their own resources, and were obliged, for the most part, either to get along without these goods or to provide them for themselves.[16]

The Continental Congress met September 5, 1774, in Carpenter's Hall, Philadelphia.[17] On September 6, realizing the vital necessity of promoting domestic manufactures, the Congress resolved that a committee be appointed to examine and report the "several Statutes, which affect the trade and manufactures of the colonies."[18]

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13. Clark, op. cit., 215.
14. Ibid.
15. Edward Channing, A History of the United States, III, 390.
16. Jameson, op. cit., 83.
17. Arthur M. Schlesinger, The Colonial Merchants and the American Revolution, 412.
18. Worthington C. Ford (ed.), Journals of the Continental Congress, 1774-1789 (hereafter referred to as Journals) I, 26; Schlesinger, op. cit., 412.

This committee, consisting of eleven members from as many different colonies, brought in a report which was read September 19 and referred to the committee appointed to "state the rights" of the colonies.[19] Further action was delayed for some time.

As early as August of 1774, the Virginia Convention resolved that attention should be turned from the cultivation of tobacco to the "cultivation of such articles" as would form a basis for "domestic manufacture, which we will endeavor to encourage throughout this colony to the utmost of our abilities."[20] Other colonies went a step further and began offering prizes and bounties for the encouragement of manufacturing and the formation of societies of domestic arts.[21] Just five days after the first meeting of the Continental Congress, the Council of North Carolina offered a premium of fifty pounds for the best twenty-five yard piece of linen produced within the colony, and another premium of fifty pounds for the first woolen cloth produced.[22] Two months later the Provincial Congress of South Carolina offered premiums to encourage the manufacturing of cotton, linen, and woolen goods in

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19. Journals, I, 29, 41.
20. Jameson, op. cit., 86.
21. Ibid.
22. William L. Saunders (ed.), The Colonial Records of North Carolina, X, 218.

the colony.[23]

Although there had been considerable manufacturing in the colonies during the colonial period, little improvement had been made in the "processes of manufacture."[24] Much attention was given in the early part of the Revolution to the devising of new processes for making woolcards.[25] In September of 1775 the Council of North Carolina offered a premium of fifty pounds for the first hundred "woolen cards" produced in the colony, and a similar sum for the first fifty "pairs of good Cotton Cards of Wire."[26] After the beginning of the Revolution, many articles were especially needed for the army. Shoes, stockings, and other clothing wore out quickly on the march and in the camp. Cloth for tents and blankets was also urgently needed.[27] To supply this need, the United Company of Philadelphia for Promoting Manufactures was formed in 1775 to organize on a large scale the making of American woolen, linen, and cotton cloth. This company eventually supplied a part of the clothing used by the Revolutionary army.[28]

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23. Peter Force (ed.), American Archives: A Documentary History of the Origin and Progress of the North American Colonies, Fourth Series, IV, 73.
24. Isaac Lippincott, Economic Development of the United States, 109.
25. Jameson, op. cit., 87.
26. Saunders, op. cit., X, 217.
27. Channing, op. cit., III, 391.
28. Jameson, op. cit., 86.

In September of 1775, Congress ordered a committee to purchase a large quantity of clothing, and in November of the same year, the Congress recommended that all soldiers "be put into some Uniform" and that the public purchase the cloth and "have it made up."[29]

Among the members of the Continental Congress, Benjamin Franklin and John Adams were the leading spirits in the effort to encourage the manufacture of cloth in the colonies.[30] Adams strenuously endeavored to arouse the interest of his colleagues in this movement. Asserting that the colonies could, by changing their habits of living, exist forever without foreign trade, Adams emphasized the necessity of producing clothing at home.[31] He felt no uneasiness regarding the domestic supply of wood and iron: the essential factor was the production of clothing, and Adams urged those employed in raising "surpluses of food and commodities for exportation" to engage in raising flax and wool and "manufacturing them into clothing."[32] Continuing his efforts in this direction, Adams drew up a set of resolutions which he presented and

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29. Louis C. Hatch, The Administration of the American Revolutionary Army, 86; Force, op. cit., Fourth Series, III, 1157.
30. Richard Smith, Diary, Jan. 6, 1776, Edmund C. Burnett (ed.), Letters of Members of the Continental Congress, I, 300. Hereafter cited as Burnett.
31. John Adams to James Warren, Oct. 19, 1775, ibid., I, 236.
32. John Adams to James Warren, Oct. 20, 1775, ibid., I, 239.

carried through Congress on March 21, 1776.[33] The Congress resolved:

> That it be recommended to the several assemblies, conventions, councils or committees of safety, and committees of correspondence and inspection, that they exert their utmost endeavors to promote the culture of hemp, flax, and cotton, and the growth of wool in these United Colonies. Resolved, that it be recommended to the said assemblies, conventions, and councils or committees of safety, that they take the earliest measures for erecting and establishing in each and every colony a society for the improvement of agriculture, arts, manufactures, and commerce, and to maintain a correspondence between such societies, that the rich and numerous natural advantages of this country, for supporting its inhabitants may not be neglected.[34]

A third resolution recommended to the assemblies and conventions of the various colonies that they "forthwith consider ways and means of introducing the manufacture of duck and sail cloth" into such colonies where they were not understood, and of "encouraging, increasing and improving" such manufactures already in existence.[35] The fourth and last of these resolutions provided that a committee be appointed to receive all plans and proposals

> for encouraging and improving the agriculture, arts, manufactures, and commerce

of the colonies, and to correspond with the conventions and councils of the various colonies upon "these interesting subjects."[36]

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33. Charles Francis Adams (ed.), The Life and Works of John Adams, II, 487.
34. Journals, IV, 224.
35. Ibid.
36. Adams, op. cit., II, 487.

On June 19, 1776, Congress made a more definite request of the colonies in regard to the making of clothing. Congress now asked the several colonies "forthwith to cause a suit of cloaths," of which the "waistcoat and breeches" were to be made of deer leather, to be manufactured in the respective colonies for each soldier enlisted in the American army.[37] In addition to the suit of clothes, the colonies were asked to provide from domestic manufacture "a blanket, felt hat, two shirts, two pair of hose, and two pair of shoes" for each soldier enlisted from the respective colonies.[38] To encourage the colonies in discharging these duties, Congress resolved to grant them sufficient funds for complying with the congressional request.[39] Congress also granted large amounts of power to certain individuals who were to procure deer skins from which "breeches for the soldiery" would be made.[40]

Although the states endeavored to comply with the requests made by Congress, they experienced considerable difficulty in obtaining material and having it made into clothing. America was not essentially a manufacturing country, and many obstacles were encountered in the making of goods.[41] At least two thousand soldiers were

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37. Journals, V, 466.
38. Ibid., V, 466-467.
39. Ibid.
40. Ibid., 712.
41. Hatch, op. cit., 86-87.

unfit for duty at Valley Forge because of lack of clothing.[42] To remedy this serious situation, Congress appointed a committee to devise "ways and means" for providing clothing for the army.[43]

September 25, 1775, Congress asked the states to forward to headquarters the materials collected in compliance with the request of June 19. On the same day a committee consisting of one member from each state was appointed and authorized to employ persons in their respective states to purchase sufficient materials "fit for soldiers clothes."[44] This committee was ordered to take the "most effectual and speedy methods" for getting the materials purchased made into clothing for the army.[45] Congress authorized General Schuyler to employ proper persons "immediately to make up into clothes for the army" the woolens collected at Albany, thus eliminating the waste of time which would be required for forwarding the materials to headquarters.[46] One other measure pertaining to clothing was passed before Congress turned their attention to other matters. Mr. Mease, the clothier-general, was directed to use the "utmost diligence" in "buying, collecting and getting made" as many "shirts,

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42. Ibid., 87.
43. Journals, V, 820.
44. Ibid., 821.
45. Ibid.
46. Ibid.

shoes, and stockings as possible," and was further directed to make weekly reports to Congress concerning the progress of his endeavors.[47]

Since the states were unable to provide sufficient clothing for the army, Congress tried importing on their own account. It was found that this method involved much danger and delay. The goods must be brought over the ocean at the risk of capture by British cruisers. Furthermore, the materials were likely to be brought to Portsmouth when the army was on the Delaware. The presence of the British fleet made long coastal voyages dangerous, and wagons had to be procured to drag the goods slowly over the country.[48]

Prices rose enormously, and Congress therefore recommended that the states purchase clothing and materials at prices fixed by their own authority. The legislatures were asked to enact laws regulating the makers and retailers of "goods, wares, and merchandise" in their respective states.[49] In order to deal with the situation more effectively, Congress set up, on October 9, 1776, a commissary of clothing for each of the armies of the United States,[50] and seven days later empowered the commisary of the northern army to employ "suitable persons"

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47. Ibid.
48. Hatch, op. cit., 87-88.
49. Ibid., 87.
50. Journals, VI, 858.

to make into clothing all the materials collected in the northern states.[51] In November, Congress had the Secret Committee to send out two agents to confer with the commissaries of each state, and to aid in purchasing materials and having them made into clothing.[52]

In the extremity of distress for want of clothing, Congress resorted to still other measures for procuring the badly needed articles. In the fall of 1776, Congress was informed that a captured ship loaded with "coarse clothes" was being held in Rhode Island.[53] Congress at once ordered Governor Cooke to purchase the materials at continental expense and have the cloth made into clothes for the army.[54] In February of 1777, Congress appointed three men to appraise the woolens on a privateer, which had been brought into port at Baltimore. Congress ordered that this material be delivered to Samuel and Robert Purviance, who were directed to make it up into "200 suits of cloaths and 693 shirts," which were to be delivered to the Maryland delegates.[55]

In December, 1776, Congress directed the clothier-general to employ all the available tailors in the country

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51. Ibid., 880
52. Francis Lewis to the President of the New York Convention (Abraham Broeck), Jan. 16, 1777, Burnett, II, 221.
53. Journals, VI, 897.
54. Ibid.
55. Ibid., VII, 167.

to make clothes for the army.[56] In order to promote the manufacture of leather goods in the states, Congress resolved to allow Governor Caswell of North Carolina to draw on the treasury for such sums as he would need in carrying out the directions of that body. In November of 1777, Governor Caswell was directed to appoint proper persons within the state to purchase all the "merchantable leather and deer skins" which could be used for making shoes and breeches.[57] The Governor was ordered to retain so much as could be made into "shoes and breeches within the space of four months"; the remainder he was to deliver to the Board of War.[58]

In spite of all the resolutions, recommendations, and orders of Congress passed in an effort to promote the manufacture of clothing, the supply was still wretchedly inadequate in 1777 and 1778. The army was poorly clothed. One account states that two thousand eight hundred soldiers were in a "naked condition" in December of 1777,[59] and in February of 1778, a member of Congress wrote that for want of clothing the army was decreasing every hour "not by one and two at a time, but from seven to twelve."[60] To meet this dire situation, Congress hit upon the plan of asking the clergy of all

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56. Ibid., VI, 998.
57. Ibid., IX, 965-966.
58. Ibid., 966.
59. Daniel Roberdeau to the President of Pennsylvania (Thomas Wharton), Dec. 22, 1777, Burnett, II, 257-258.
60. John Henry, Jr., to the Governor of Maryland (Thomas Johnson, Jr.), Feb. 14, 1778, Burnett, III, 85.

denominations in the middle states to "solicit charitable donations of woolens and linens, made and unmade."[61] This plan was of little effect, however, as Congress made no provision for having the materials made into clothing.

The efforts of Congress to procure clothing were not as futile as the condition of the army might indicate. Congress had perhaps procured enough clothing for the entire army, but the "cloathier's department" abounded in "peculation, neglect of duty, avarice, and insolence."[62] This condition was largely responsible for the lack of clothing in the army.[63] Large quantities of linen and woolen materials were collected by two agents in Connecticut in 1778, but due to the inefficiency of the clothier's department, these supplies were stored away unmade for several months. This matter was finally brought before Congress, and measures were taken to have the materials made and distributed.[64]

The efforts of the Continental Congress to promote the manufacture of clothing consisted largely of recommendations to the colonies, asking that they encourage manufacturing. On October 5, 1778, Congress resolved that in the future it would be "best for the several

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61. Journals, X, 23.
62. Thomas McKean to George Read, April 3, 1778, Burnett, III, 149-150.
63. William Ellery to the Governor of Rhode Island (Nicholas Cooke), March 1, 1778, ibid., 103.
64. Journals, XI, 844-847.

states to make provision for clothing their respective Quotas of Troops" and asked the states to take "effectual measures" for supplying the necessary clothing.[65] Again in September of 1779, Congress requested the states to provide clothing for their respective quotas of troops, and urged that they obtain either by "purchase, manufacture, or importation" such articles as hats, hose, shirts, blankets, and shoes.[66]

Congress passed no new measures to promote the manufacture of clothing in 1779 and 1780, but exerted considerable efforts to reform the existing clothing department.[67]

The army was better clothed in 1779 than it had been since the beginning of the war.[68] This condition was not due to an increased domestic supply so much as to the increased importation from Europe.[69] Congress relied greatly on this source of supply, at one time advancing five hundred thousand dollars to the Commercial Committee for purchasing clothes which were "daily arriving" from Europe.[70] Consequently, when the Articles of Confederation went into effect on March 1, 1781, the problem of clothing was not as serious as it had been in the earlier period of the war.[71]

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65. Journals, XII, 996.
66. Ibid., XIII, 1044-1045.
67. John Fell, Diary (July 23, 24, 1779), Burnett, IV, 343.
68. Worthington C. Ford (ed.), The Writings of George Washington, VII, 369.
69. Journals, XVII, 581.
70. Ibid., XIII, 273-274.
71. John Mathews to Nathanael Greene, Dec. 12, 1780, Burnett, V, 485.

CHAPTER II

ARMS AND MUNITIONS

In 1750 the British Parliament passed an act forbidding the setting up of any rolling and slitting mills, plating mills, and steel furnaces in the colonies.[1] This act, designed to restrict the manufacturing of the colonies and confine them to the production of raw materials, was flagrantly disregarded by the colonies. Due to the troublesome times of the French and Indian War, this prohibitory act was generally obeyed for the first few years after its enactment, but in the decade of the sixties and in the following years many interdicted iron works were established.[2]

Cannon had been cast at several places during the colonial wars,[3] and the high state of development reached by the colonial iron industry was an important factor in preparing the way for the Revolution.[4] At the outbreak of hostilities, the colonies already produced considerable quantities of iron. Several ironmasters who adhered to the English cause were forced to leave the country and their property was confiscated.[5] The colonies,

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1. Bining, op. cit., 86.
2. Ibid.
3. Clark, op. cit., 219.
4. Bining, op. cit., 110.
5. Clark, op. cit., 219.

therefore, possessed considerable iron resources at the beginning of the Revolution.

The problem of the gravest concern to the colonies was the limited supply of gunpowder. In 1774, Great Britain had forbidden the exportation of gunpowder, firearms, and other military stores.[6] Deprived of this source of powder, the colonists made every effort to procure nitre for purposes of domestic manufacture.[7] An adequate supply of gunpowder was, of course, vitally essential to the successful prosecution of the war for independence. Realizing this fact early in the summer of 1775, the Continental Congress took up the matter of encouraging the manufacture of munitions in the colonies. On June 10, Congress recommended to the committees of the towns and districts of Massachusetts, New Hampshire, Rhode Island, Connecticut, New York, and eastern New Jersey that they collect all the "saltpetre and brimstone" in their several towns and districts, and transmit it to the Convention at New York.[8] Congress directed the convention of New York to have all the powder mills in the colony put in a condition to manufacture "immediately into powder" all the materials which might be procured from the neighboring colonies. The committees of western New

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6. Jameson, op. cit., 6.
7. Channing, op. cit., III, 392.
8. Journals, II, 85.

Jersey, Pennsylvania, Maryland, and Delaware were asked to collect all the saltpetre and sulphur in their districts and send it to the Philadelphia Committee in order that it might be speedily manufactured into gunpowder. Congress likewise requested the colonies of Virginia, North Carolina, and South Carolina to collect their saltpetre and sulphur in order that it might be made into gunpowder for the use of the continental troops.[9] A committee of five was appointed by the Congress to "devise ways and means to introduce the manufacture of salt petre in these colonies."[10] A further resolution of June 10, 1775, requested the inhabitants of all the colonies to sell the saltpetre and sulphur collected for their own use to the Congress, and it was voted that these supplies should be paid for out of the "Continental fund."[11]

It seems that the colonies responded rather favorably to the congressional recommendations regarding saltpetre, particularly South Carolina. Since the southern colonies had no powder mills and no "persons skilled in making gunpowder," the South Carolina delegates in Congress wrote to the Secret Committee of Charleston recommending that all the saltpetre that could be obtained from stores and private individuals be sent to the Congress.[12]

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9. Ibid., II, 85-86.
10. Ibid., II, 86.
11. Ibid.
12. South Carolina Delegates in Congress to Secret Committee, Charleston, July 1, 1775, Force, op. cit., Fourth Series, II, 1519.

Some four weeks later, a boat carrying six or seven tons of the desired substance arrived in Philadelphia from South Carolina.[13] A considerable supply was also received from other colonies, and on July 27, 1775, Congress voted $50,000 to pay for the amount received.[14] A month previously John Adams had written that the Congress had a number of plans for making saltpetre, and expressed his confidence that Congress should soon be able to furnish saltpetre and powder of its "own Manufacture."[15]

Not content with the measures already taken, on July 28, 1775, due to the "uncertain and dangerous necessity" of relying on foreign importation of gunpowder, it was recommended to the conventions of the "tobacco Colonies" that they appoint "one or more manufactories on each river" in their respective colonies.[16] These "manufactories" were to be put into operation as quickly as possible, under the direction of skillful and diligent persons. These recommendations were made to the southern colonies because of the large amounts of nitre in old tobacco barns and warehouses.[17] To the other colonies Congress recommended the immediate use of whatever mode of making saltpetre that should be found best adapted to their

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13. John Adams to James Warren, July 27, 1775, Burnett, I, 178.
14. Ibid.; Journals, II, 212.
15. John Adams to James Warren, June 27, 1775, Burnett, I, 145.
16. Journals, II, 219.
17. Ibid.

"respective circumstances," and called to the attention of the "good people of these United Colonies" a number of methods suited to "different circumstances and different materials."[18] To the conventions of these colonies, Congress also recommended the setting up of powder mills and the employment of skillful persons for operating them.[19]

To encourage the making of saltpetre in the colonies, Congress proposed on July 28, 1775, to pay a bounty of "half a dollar for each pound" of this valuable substance which should be manufactured before October 1, 1776.[20] Increased interest was taken in procuring this much needed article of war,[21] and large amounts were collected from old cellars and stables.[22]

On the same day that Congress proposed a bounty on saltpetre, a resolution was passed asking the conventions and assemblies of the various colonies to grant such premiums for the collecting and refining of saltpetre as might "be judged proper."[23] The Provincial Congress of North Carolina responded by offering a premium on

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18. Ibid.
19. Ibid.
20. Ibid.
21. C. H. Van Tyne, The American Revolution, in A. B. Hart (ed.), The American Nation: A History, X, 136.
22. Jameson, op. cit., 88.
23. Journals, II, 219.

September 10, 1775, of one hundred pounds to the person who should produce the greatest quantity of sulphur within the next eighteen months.[24] At the same time, the Provincial Congress of North Carolina offered a sum of twenty-five pounds for every "hundred weight" of "good Merchantable Saltpetre" that should be manufactured in the province and delivered to the council within the space of six months; twenty pounds were offered for every hundred weight manufactured in the colony in the six months following.[25] A sum of two hundred pounds was offered for the first five hundred weight of good gunpowder that should be manufactured in the colony and delivered to the Council within six months, and a sum of one hundred fifty pounds was offered for the second five hundred weight, on condition that it be made and delivered within twelve months.[26] With such incentives offered for its manufacture, the making of saltpetre was taken up with success by a considerable number of individuals.[27]

On October 16, 1775, Congress again called on all persons in New York possessing saltpetre to send this material to the president of the New York Convention in order that it might be manufactured into gunpowder. On

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24. Saunders, op. cit., X, 219.
25. Ibid., 216.
26. Ibid.
27. John Adams, Diary (September 15, 1775), Burnett, I, 195.

the same day a committee of five members was appointed to "consider farther ways and means of promoting the manufacture of saltpetre."[28] This committee made its report November 10, 1775, and recommended that a "public saltpetre works" be established in Virginia under the supervision of "capable persons." It was also recommended that the assemblies of the other colonies should appoint persons to "employ and set to work such and so many of their countrymen" as they should judge proper, to "collect earth" from which nitrous salt should be extracted and manufactured into saltpetre.[29] Acting upon these recommendations, Congress appointed a number of committees to negotiate with the proprietors of warehouses in the various counties of Virginia, and empowered these committees to purchase all the saltpetre which might be secured from the floors and yards of the warehouses for the next twelve months. Owners who were willing to manufacture their own materials were offered "two fifths" of a dollar for every pound of "clean, pure, and neat" saltpetre delivered to the committees.[30] In case a proprietor did not care to manufacture saltpetre himself, Congress would appoint a manager to hire laborers, set up the necessary apparatus, and manufacture the materials.

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28. Journals, III, 296.
29. Ibid., 345-346.
30. Ibid., 346-347.

To such a proprietor, Congress would pay "one forty-fifth" part of a dollar for every pound of saltpetre obtained.[31] Congress agreed to pay all the expenses incurred by the superintendents of such works for both labor and apparatus, and passed a further resolution requesting the conventions of the various colonies to employ laborers to "work up earth" and to collect and place in beds all materials suitable for making saltpetre.[32] These materials were to be placed under sheds and duly exposed to the air, "in order to increase the produce of it."[33] Congress provided that these recommendations should be printed and made public throughout the colonies.[34]

On the following day, Congress again took up the matter of securing saltpetre, and recommended to the proprietors of tobacco warehouses in Virginia and Maryland who could not immediately have their floors worked for saltpetre, that they have their floors dug up and left "fine, loose, and light, at least six inches deep, suffering the tobacco stalks and trashy leaves to spread thereon" in order that the soil might be thoroughly "impregnated with nitrous particles, the manufacture of saltpetre facilitated, and the quantity thereof greatly increased."[35]

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31. Ibid., 347.
32. Ibid., 348.
33. Ibid.
34. Ibid.
35. Ibid., 349.

In November of 1775, the Provincial Congress of South Carolina followed the example set by North Carolina in September, and offered a number of premiums for the making of sulphur and saltpetre. A bounty of two hundred pounds was offered to the person erecting a saltpetre works and producing the first fifty pounds of good saltpetre in the colony. Premiums of one hundred fifty pounds, one hundred pounds, and fifty pounds, respectively, were offered for the second, third, and fourth establishments producing fifty pounds of saltpetre.[36] To the person erecting a sulphur mill and producing the first hundred pounds of good sulphur in the colony, a premium of two hundred pounds was offered. Premiums of one hundred pounds and fifty pounds, respectively, were offered for the second and third sulphur mills established in the colony.[37]

The Continental Congress continued their efforts to promote the manufacture of saltpetre, and even had specimens sent them for examination.[38] On January 16, 1776, Congress placed the manufacture of saltpetre under the direction of the Secret Committee and ordered this committee to procure all the saltpetre possible and have it made into gunpowder at once.[39] February 9, the Secret

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36. Force, op. cit., Fourth Series, IV, 72.
37. Ibid.
38. Richard Smith, Diary (Jan. 5, 1776), Burnett, I, 297.
39. Journals, IV, 124.

Committee was again directed to purchase saltpetre and to "take every necessary measure" to have it manufactured into gunpowder with "all possible expedition."[40] This committee was also asked to make reports to Congress concerning the state of powder, arms, and saltpetre in the colonies.[41]

Congress spent a great deal of time considering means of manufacturing saltpetre and ways for promoting the establishment of powder mills.[42] On January 25, 1776, a committee was appointed to persuade owners of mills used for other purposes to convert their establishments into powder mills. Another duty of this committee was that of considering suitable sites for the erection of powder mills in the colonies.[43]

The efforts of Congress to promote the manufacture of saltpetre and gunpowder proved to be rather successful. In January of 1776, Congress sent fifteen tons of powder to General Washington and had enough saltpetre to make eighty tons more.[44] Thomas Lynch, a member of Congress, wrote to Washington expressing satisfaction for the large quantities of saltpetre being obtained and stated his belief that still greater amounts would be

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40. Ibid., 124.
41. Ibid.
42. Richard Smith, Diary (Feb. 12, 1776), Burnett, I, 346.
43. Force, op. cit., Fourth Series, IV, 526.
44. Thomas Lynch to George Washington, Jan. 16, 1776, ibid., 687.

procured in the future.[45] Lynch's prediction proved to be correct, for vessels carrying as much as sixty tons of this material arrived at Philadelphia within the next month.[46]

On February 12, 1776, Congress directed the Secret Committee to deliver fifty tons of saltpetre to the Pennsylvania Committee of Safety, and requested this committee to have it manufactured into gunpowder "in the cheapest and most expeditious manner."[47] Ten tons of saltpetre were to be sent to the Massachusetts Council with the request that it be manufactured into gunpowder and sent to General Washington. Congress directed that still another ten tons be sent to a New York mill to be made into gunpowder, and requested that this mill be remodeled and enlarged.[48]

On February 22, 1776, other resolutions were passed pertaining to this vital business. The assemblies, conventions, councils, and committees of safety of the various colonies were asked to "exert themselves in devising ways and means of promoting and encouraging the manufacture of saltpetre, and of introducing that manufacture into private families."[49] It was further recommended to the assemblies and conventions of the colonies

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45. Ibid.
46. John Langdon to Meshech Weare, Feb. 13, 1776, ibid., 1152.
47. Journals, IV, 128.
48. Ibid., 128-129.
49. Ibid., 170.

that they immediately establish public works in every county of their respective colonies, at the expense of the colonies, for manufacturing this basic commodity. The assemblies and conventions were requested to appoint committees of their own members "immediately to set up such manufactures."[50] Instead of having the saltpetre sent to Philadelphia, as had been done formerly to a great extent, Congress recommended to the assemblies and conventions that they have powder mills erected in the various colonies for converting the saltpetre into gunpowder. The assemblies and conventions of the colonies were directed to appoint committees to build such mills, and to procure persons "well skilled in the manufacture of powder."[51] These resolutions were designed to relieve Congress of the expenditure of time and money in having the raw materials converted into gunpowder.

At the same time these resolutions were passed, Congress appointed a committee composed of one member from each colony to "consider of further ways and means of promoting and encouraging the manufactures of saltpetre, sulphur, and (gun) powder" in the colonies.[52] This committee was directed to correspond with the councils and conventions of the various colonies and to keep

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50. Ibid.
51. Ibid.
52. Ibid., 171.

Congress informed of the progress made in manufacturing in the colonies.[53]

While the government had achieved remarkable success in the making of saltpetre, it seems that efforts to have this material converted into gunpowder did not prove successful to a corresponding degree. According to an account of Robert Treat Paine, chairman of the Cannon Committee, in many instances "miserable trash" was turned out for gunpowder.[54] Paine wrote to the operator of a powder mill urging him to improve his own works, to communicate valuable knowledge of powder making to other mill operators, and to do all in his power to promote the manufacture of good powder.[55]

In order to eliminate the production of poor powder, Congress appointed a committee to inquire into the defects of its manufacture in the states. This committee made its report on August 28, 1776, and Congress resolved that every cask of gunpowder manufactured in the states should be inspected by a competent judge.[56] Congress then appointed an inspector and fixed his salary at "one eighth part of a dollar for every hundred weight of powder" inspected.[57] Regulations concerning the types of cask to be used were also passed, stating that every

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53. Ibid.
54. Robert Treat Paine to S. P. Eve, Sept. 25, 1776, Burnett, II, 101.
55. Ibid.
56. Journals, V, 713.
57. Ibid., 714.

cask must be made of good materials, and every manufacturer of gunpowder was required to mark every cask produced with the first letters of his name.[58] Congress also directed the legislatures of the various states to appoint state inspectors of powder, and requested that state laws be passed prohibiting persons who were producing bad powder from engaging in its manufacture. The legislatures were requested to make any other regulations for promoting the manufacture of good gunpowder that might "seem most convenient" to them.[59] In September, Congress passed some further resolutions regarding the inspection of gunpowder, and ordered the continental agents to inspect powder in all the states in which inspectors had not already been appointed.[60]

It seems that an adequate supply of powder was finally produced in the colonies. While a limited amount of munitions was imported, it appears that the continued efforts of Congress to promote the manufacture of powder in the colonies were largely responsible for the ample supply finally obtained. In the spring of 1777, John Adams stated that there was a plentiful supply of powder and expressed his confidence that the states would not want for powder in the future.[61]

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58. Ibid.
59. Ibid.
60. Ibid., 729.
61. John Adams to James Warren, March 31, 1777, Burnett, II, 313.

While the Continental Congress was exerting such untiring efforts to promote the manufacture of saltpetre and powder in the colonies, measures were also being taken to promote the manufacture of arms and other types of munitions. July 18, 1775, Congress recommended that the making of arms be encouraged in the colonies, and requested the makers of arms that they make good "substantial muskets" having barrels "three and a half" feet long with a "good bayonet" on each.[62]

The Pennsylvania Convention responded to the congressional request by passing a set of resolutions designed to promote the manufacture of steel, wire, and nails.[63] The Maryland Convention authorized the Council of Safety to lend money to certain ironmasters to carry on their furnaces for the purpose of casting cannon. Loans were also made without interest to persons erecting rolling and slitting mills in Maryland.[64] The Virginia Convention passed a resolution stating that it would recompense for all losses the first two proprietors of plating and slitting mills set up in the state, in case Great Britain sought to prohibit their operation under the law of 1750.[65]

The North Carolina Provincial Congress adopted a set of resolutions designed to encourage the manufacture

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62. Journals, II, 190.
63. Bining, op. cit., 93.
64. Ibid.
65. Ibid., 94.

of arms and provided for substantial bounties in many instances. In September of 1775 a sum of two hundred fifty pounds was offered to the first person erecting a slitting mill in the colony, and a sum of two hundred pounds was offered to the person erecting the second mill. A premium of one hundred pounds was promised to the first person who should erect a steel furnace in the colony, and twenty-five pounds were offered to the person erecting the second furnace. To any person establishing an air furnace "for Manufacturing good Merchantable Pig Iron" a sum of five hundred pounds was promised.[66] In November the Provincial Congress of South Carolina offered a bounty of one thousand pounds for the erection of the first bloomery in the colony: the sum to be paid just as soon as the first ton of good iron was produced. For the second and third forges of the same type, sums of eight hundred and seven hundred pounds, respectively, were offered. A bounty of five hundred pounds was offered for each of the first three works established for making steel in the colony. The sum of seven hundred pounds was pledged to the person or persons establishing the first rolling or slitting mill, and a premium of one hundred fifty pounds was promised to the first person making fifty gunlocks in the colony.[67] Some time later Rhode Island

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66. Saunders, op. cit., X, 216-219.
67. Force, op. cit., 72.

granted bounties on manufactured steel and Massachusetts offered premiums on wire made from American iron.[68]

Another article which was essential to the colonists in their fight for independence was lead. In October, 1775, the Continental Congress appointed a committee to inquire "after Virgin Lead and leaden ore" in the colonies,[69] and in November Congress ordered General Schuyler to superintend a search for lead.[70] In the same month the Provincial Congress of South Carolina offered a premium of five hundred pounds to the person erecting the first establishment for manufacturing lead. Smaller amounts were offered for the second and third lead factories to be set up in the colony.[71]

The Revolution and the large number of bounties offered by the various colonies gave a decided impetus to iron manufacture in America. Although the British troops destroyed a number of furnaces in the colonies, particularly around Valley Forge, there were many iron works scattered from New England to the Carolinas. These furnaces turned out materials for implements of peace as well as instruments of war.[72]

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68. Bining, op. cit., 95.
69. John Adams to Joseph Palmer, Oct. 19, 1775, Burnett, I, 237.
70. Journals, III, 361.
71. Force, op. cit., 73.
72. Bining, op. cit., 95.

During the earlier part of the war, however, there was a great scarcity of arms; the supply was alarmingly inadequate. To remedy this situation, Congress recommended to the assemblies and conventions of the various colonies that they have their gunsmiths "manufacture good Firelocks and Bayonets"; each gun to be made with a "good Bridle Lock, three quarters of an inch bore," and of "good substance at the breech," having a barrel th ee feet eight inches in length with an eighteen-inch bayonet attached to it.[73]

Congress tried importing arms from abroad and appointed a committee for this purpose early in the fall of 1775.[74] As in the case of clothing, however, this method involved a great deal of risk and delay, and was therefore not very successful during the early part of the war.[75]

In February of 1776, General Washington wrote to Congress that in spite of his efforts to arm his men, two thousand were without guns.[76] In the same month James Duane made the following note: "Want of arms - no prospect of getting them."[77]

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73. Force, op. cit., III, 1157.
74. Richard Smith, Diary (Sept. 18, 1775), Burnett, I, 199-200.
75. Hatch, op. cit., 87.
76. George Washington to President of Congress, Feb. 9, 1776, Force, op. cit., 975.
77. James Duane, Notes of Debates (Feb. 22, 1776), Burnett, I, 360.

The continental troops were also in great need of cannon. On January 15, 1776, Congress appointed a committee to devise ways and means of procuring these necessary articles of war.[78] This committee was also directed to ascertain the number of cannon needed by the army, and to discover just how large cannon could be made in the colonies.[79] The following month this committee was ordered to make investigations to determine the amount of brass in the colonies, and was directed to procure all that could be found in order that it might be used in the casting of cannon.[80] A few days later Congress authorized the cannon committee to contract with private individuals for the making of cannon.[81]

Meanwhile, Congress continued their efforts to obtain lead, directing the New York Committee of Safety to investigate lead mines in that colony and make reports to Congress of their findings.[82]

On February 23, 1776, a committee was appointed "to consider of further ways and means of promoting and encouraging the manufacture of firearms" in "all parts" of the "United Colonies."[83] A further duty of this committee was to contract for the making of muskets and bayonets for the army.[84] The following month Congress voted

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78. Journals, IV, 55.
79. Ibid.
80. Ibid., 153.
81. Ibid., 162.
82. Ibid., 153.
83. Ibid., 169.
84. Ibid.

the sum of ten thousand dollars for the use of this committee.[85]

In spite of the efforts of Congress to procure arms, large numbers of soldiers were still without weapons in the spring of 1776. A motion was made in Congress that a regiment be furnished with pikes and spears, since no guns were available, and sample spears were even demonstrated to the Congress.[86] One member of Congress wrote that much time was spent in making cannon, muskets, and in finding ways and means of supplying the troops, and added that although Congress resolved to make cannon, muskets, and ammunition, the "melancholy fact" was that "near half" of these supplies were to "be found nowhere but on paper."[87]

March 21, 1776, Congress recommended to the assemblies and conventions of the various colonies that they consider ways and means of introducing the manufacture of steel in their respective provinces.[88]

On May 23, 1776, the committee appointed to contract for the making of muskets was directed to draw up a resolution "for promoting and encouraging the making of good firearms" and to present this recommendation

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85. Ibid., 192.
86. Richard Smith, Diary, March 20, 1776, Burnett, I, 400.
87. Joseph Hewes to James Iredell, May 17, 1776, Saunders, op. cit., X, 458.
88. Journals, IV, 224.

to Congress.[89] No report was brought in for some time, and in the following month the committee was directed to consider the granting of bounties or "any other means" for encouraging the manufacture of muskets.[90]

By July of 1776 several forges were casting cannon described as "twelve and eighteen pounders."[91] After the British destroyed the furnaces near Valley Forge, Pennsylvania erected a forge for casting cannon.[92] The cannon committee contracted with private individuals for arms, and on July 22, 1776, Congress voted to advance eight thousand dollars to "Messrs. Daniel and Samuel Hughes for one thousand tons of cannon."[93]

North Carolina appropriated five thousand pounds to lease or purchase existing iron works in Guilford County, and Virginia granted subsidies for the making of cannon.[94] The Connecticut Council of Safety took possession of a large furnace owned by a royalist who had fled to England, and spent fourteen hundred pounds in preparing it to cast cannon. This furnace supplied the batteries of the Constitution and the Constellation.[95]

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89. Ibid., 384.
90. Ibid., V, 487.
91. Joseph Hewes to Samuel Johnson, July 8, 1776, Burnett, II, 4.
92. Robert Treat Paine to Henry Knox, July 16, 1776, ibid., 12.
93. Journals, V, 599.
94. Clark, op. cit., 220.
95. Ibid.

Congress and the individual states passed laws exempting workmen employed at furnaces and forges from enlistment in the army.[96] Congress authorized the use of prisoners "in the business of casting cannon" in some instances during the summer of 1776.[97] In the fall of the same year, however, Congress refused, because of "expected local objection," to grant the request of a Pennsylvania furnace owner that he be allowed to work prisoners.[98] A number of plants in Pennsylvania were, however, operated with Hessian prisoners of war leased from the Continental Congress.[99]

Flint rocks were essential to the manufacture of firelocks during the Revolution, and Congress endeavored to promote their manufacture in various ways. July 4, 1776, Congress empowered the Board of War to "employ as many persons as necessary" to manufacture flint for the colonies.[100] At the same time Congress applied to the assemblies and conventions of the various colonies for information concerning the location of the best flint in the respective colonies, and requested the names and addresses of persons skilled in flint manufacture.[101] Two days later the war office requested "all persons" in the

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96. Ibid.
97. Journals, V, 600.
98. Robert Treat Paine to Peter Grubb, Sept. 18, 1776, Burnett, II, 94.
99. Clark, op. cit., 220.
100. Journals, V, 517.
101. Ibid.

"United American States" who were "able to inform Congress of any quantities of flint stone, or of any persons skilled in the manufacture of flints" to apply either in person or by letter to the Board of War.[102] The war office requested that all newspapers in the colonies insert this "advertizement."[103]

Samples of flint and information concerning the quantity and kinds to be obtained were sent to Congress from New Jersey, Pennsylvania, and other colonies.[104] William Maclay informed the Board of War of a vein of flint in Pennsylvania that appeared to be "inexhaustible" and suggested the advisability of setting up a manufacturing establishment there.[105] On being informed of large quantities of flint in Maryland, Congress asked the Maryland Council of Safety to procure some person who understood the manufacture of flints to "look after them."[106] The council appointed a competent person and directed him either to manufacture the stones in their native locality or to have them moved to a manufacturing establishment. The council proposed to pay any expenses which might be incurred in this work and agreed to pay a "reasonable price"

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102. Force, op. cit., Fifth Series, I, 34.
103. Ibid.
104. Ibid., 139, 410.
105. William Maclay to Richard Peters, July 23, 1776, ibid., 533.
106. The Maryland Delegates to the Maryland Council of Safety, July 27, 1776, Burnett, II, 27.

to the owner of the stones.[107]

In October of 1776, the Board of War employed a number of workers to "make up a quantity of cartridges" for the use of the continental army.[108] In the following month Congress sent a letter to Governor Trumbull asking him to have the Salisbury and Livingston foundries examined. He was further directed to employ workers to cast cannon at these establishments, and to have twenty cannon, "carrying shot of eighteen pounds weight," cast at the Salisbury works as quickly as possible.[109] In December a committee was appointed by Congress to negotiate with Governor Trumbull, supervisor of the Salisbury foundry; with Mr. Livingston, owner of a furnace in New York; and with the Massachusetts Council for the purpose of procuring cannon.[110]

On December 26, 1776, Congress received a letter from General Washington urgently requesting cannon. Congress immediately sent for a Mr. Byers, who was an expert at casting cannon, to come from New York to Philadelphia and operate the air furnace there.[111] Efforts were also made to find "any other person" capable of

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107. Maryland Council of Safety to Mr. Nichols, August 7, 1776, Force, op. cit., 807.
108. The Board of War to Nathanael Greene, Oct. 22, 1776, Burnett, II, 128.
109. Journals, VI, 988.
110. Ibid., 1050.
111. Francis Lewis to Robert Morris, Dec. 26, 1776, Burnett, II, 190.

conducting foundries.[112] Congress also added three new members to the Cannon Committee and instructed this committee to procure ten "six Inch Brass Howitzers" as soon as possible.[113]

In the spring and summer of 1777, there was a "universal cry" for arms.[114] Many of the soldiers were without muskets and necessary weapons.[115] Congress directed the Secret Committee to import two hundred and twenty-six brass cannon and "arms and equipage for three thousand horse" from France.[116]

It seems that Congress did very little to promote the manufacture of arms in the colonies during the year 1777. In the fall of that year a great many arms and munitions arrived from France, greatly relieving the dire need for weapons felt by the continental troops.[117]

Early in 1778 Congress resumed their efforts for promoting manufactures. On January 15, 1778, the Board of War was authorized to contract with Whitehead Humphries, owner of a furnace in Philadelphia, for making

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112. Ibid.
113. Francis Lewis to Robert Morris, Jan. 15, 1777, ibid., 219.
114. Henry Laurens to William Thompson, Aug. 17, 1777, ibid., 452.
115. Ibid.
116. Robert Morris to Franklin, Deane, and Lee, Jan. 14, 1777, in Francis Wharton (ed.), The Revolutionary Diplomatic Correspondence of the United States, II, 246.
117. Johathan Baynard Smith to the Vice-President of Pennsylvania (George Bryan), Oct. 19, 1777, ibid., 591.

a "quantity of steel" for the use of the "continental artificers."[118] As the iron produced at the Andover works in New Jersey would "only with certainty" answer the purpose of making steel, Congress directed the Board of War to communicate with the governor and council of New Jersey, urging that they take the "most proper" means for putting the Andover works in blast and obtaining a supply of iron "without delay."[119] Congress also appointed a delegate to contract for the needed supply of iron from the Andover works.[120] These measures proved successful, and Humphreys produced a considerable quantity of steel, for which he was well paid by the Congress.[121]

On January 2, 1779, a memorial was presented to Congress from Messrs. Penet and Couloux, who proposed to "establish a manufactory for making firearms and side arms of all kinds, in some convenient place" in the United States, provided Congress would furnish "proper encouragement."[122] Penet and Couloux agreed to contract for making "100,000 muskets with bayonets of the best kind, compleatly finished, at the price of 26½ livres apiece."[123]

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118. Journals, X, 56.
119. Ibid.
120. Ibid.
121. Ibid., 65.
122. Ibid., XIII, 17.
123. Ibid.

They promised delivery of twenty thousand of these arms within two years, and the remainder within seven years. After brief consideration, Congress authorized the Board of War to contract with Penet and Couloux for a "suitable number of muskets, with bayonets of a proper size, and other arms, to be manufactured" in the states.[124]

In April of 1779, Governor Trumbull wrote to Congress proposing that the Salisbury Iron Works be taken over by that body.[125] The production of supplies at the Andover works, however, which were operating under a contract with the Congress at that time, was "going on very tediously and heavily, by reason of the great difficulty in procuring hands, and other impediments."[126] This condition, in spite of "every assistance" that the Board of War could afford" influenced Congress not to assume control of the Salisbury furnace.[127]

While a considerable quantity of arms was manufactured in the American states, the supply remained inadequate throughout the year 1779.[128]

In the year 1780, large quantities of arms and munitions were furnished by France.[129] It seems that

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124. Ibid.
125. John Fell, Diary, April 1, 1779, Burnett, IV, 129.
126. Journals, XIII, 406-407.
127. Ibid.
128. Jesse Root to the Governor of Connecticut (Jonathan Trumbull), Feb. 20, 1781, Burnett, V, 576.
129. Ibid.

during 1780 and the early part of 1781 no efforts were made by Congress to promote the manufacture of arms and munitions. With the arms received from France supplementing those being produced in America, the problem of supplying the continental troops with weapons became a much less critical one.

CHAPTER III

SALT AND OTHER COMMODITIES

Being essential to the health of man and beast, salt, an item of prime importance to any people, was especially needed by the American colonists.[1] Having little knowledge of refrigeration or canning, they used salt extensively in drying fish and in preserving and drying other meats, items which counted greatly in their food supply. Salt was employed not only for home use, but was used also in the manufacturing of commercial provisions.[2]

In 1727, Parliament established the right of the Pennsylvanians to import their salt directly from Europe. The New Englanders had already been granted this privilege, and a few years later the same right was extended to New York.[3]

Salt was easily imported, coming back in the natural round of trade with the West Indies and southern Europe.[4] Nevertheless, the colonies early endeavored to

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1. Channing, op. cit., 391.
2. Clark, op. cit., 222.
3. Evarts B. Greene, Provincial America, 1690-1740, in A. B. Hart (ed.), op. cit., VI, 178.
4. Clark, op. cit., 222.

promote the domestic manufacture of this necessary article. In 1648 the colony of Massachusetts granted John Winthrop three thousand acres of land upon condition that he set up salt works making one hundred tons annually.[5] Three years later, Connecticut offered Winthrop the "lands, wood, timber, and water" within two or three miles of any salt mines that he might discover and develop, provided these lands were not already occupied.[6]

Virginia granted subsidies for the making of salt, offering Colonel Edmund Scarborough ten thousand pounds of tobacco if he would manufacture eight hundred bushels of salt in the province, a condition which he fulfilled in 1660.[7] In 1694 South Carolina offered a bounty for the manufacture of salt.[8] During the latter part of the seventeenth century and the early part of the eighteenth, several of the colonies, including Massachusetts, Connecticut, Virginia, and South Carolina, attempted to promote the manufacture of salt by granting monopolies to certain individuals.[9]

While the making of salt was carried on with varying success throughout the colonial period, at the beginning of the Revolution the production was not equal to the demand.[10] It was high in price and was greatly

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5. Ibid., 40.
6. Ibid.
7. Ibid., 39.
8. Ibid., 36.
9. Ibid., 50.
10. Ibid., 222.

needed throughout the period of hostilities.[11] Large quantities of salt were needed to preserve food for the army, and both public and private enterprise was enlisted to increase its domestic manufacture.[12] For a time salt was obtained largely by boiling sea water in kettles; later, large shallow pans were used in which the sea water was allowed to evaporate.[13]

On July 31, 1775, the Continental Congress appointed a committee to "inquire into the cheapest and easiest methods" of making salt in the colonies.[14] In October of the same year another committee was appointed to investigate the methods of making salt in the colonies, with instructions to transmit their discoveries to John Adams, chairman of the earlier committee.[15]

On December 29, 1775, Congress passed, under the leadership of Benjamin Franklin, a resolution "earnestly" recommending to the several assemblies and conventions "immediately to promote, by sufficient public encouragements," the making of salt in their respective colonies.[16]

Maryland and Rhode Island responded to the congressional recommendation by granting bounties for salt

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11. Channing, op. cit., 392.
12. Clark, op. cit., 223.
13. Channing, op. cit., 392.
14. Journals, II, 235.
15. John Adams to Joseph Palmer, Oct. 19, 1775, Burnett, I, 237.
16. Richard Smith, Diary, Dec. 29, 1775, ibid., I, 290; Journals, III, 465.

made in their respective provinces.[17] North Carolina and South Carolina had already passed acts designed to promote the making of salt. On September 10, 1775, North Carolina offered a premium of seven hundred fifty pounds to any person who should erect "proper works for manufacturing common Salt on the sea shore."[18] In November of the same year the Provincial Congress of South Carolina offered a premium of three hundred pounds for the establishment of the first salt works in the colony; this sum was to be paid as soon as the first hundred bushels of salt should be produced. A premium of two hundred pounds was offered on the same condition for the establishment of the second "salt manufactory" in the colony.[19]

While Congress did endeavor to promote the domestic manufacture of salt, it seems that an equal amount of time was devoted either in directly encouraging the importation of this necessary commodity or in passing resolutions allowing its importation by the various colonies. On November 22, 1775, Congress resolved that the colonies ought to send corn, wheat, pork, beans, peas, and rice to Bermuda in exchange for salt.[20] December 29, 1775, due to the "great distress" caused by a lack of salt in the colonies, Congress voted to allow Virginia, Maryland, and

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17. Clark, op. cit., 36.
18. Saunders, op. cit., X, 218.
19. Force, op. cit., Fourth Series, IV, 72.
20. Journals, III, 362.

North Carolina to import as much salt as their conventions or councils of safety should think necessary.[21] April 18, 1776, Congress empowered the Secret Committee to import salt on continental account.[22] In September of the same year, the Marine Committee was empowered to import salt and directed to import as much as possible.[23] The following month, still another measure designed to promote the importation of salt was passed. The commissary general was directed by Congress to employ "suitable persons" to import such quantities of salt as he should judge necessary.[24]

There was a considerable amount of speculation in salt and the price was exorbitant.[25] To remedy this condition, Congress appointed a committee to regulate the price of salt in the colonies. This committee recommended to Congress on May 28, 1776, that the price of salt should be set at "2/3 dollar per bushel" at the place of manufacture or the place of importation, with allowance for transportation to other points.[26] This committee also recommended that a bounty of "1/3 of a dollar per bushel" be granted by Congress for the manufacture of salt.[27] Two days later, Congress empowered the "committee of

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21. Ibid., 464.
22. Ibid., IV, 290.
23. Ibid., V, 831.
24. Ibid., VI, 859.
25. Ibid., IV, 397-398.
26. Ibid.
27. Ibid., 398.

observation and inspection" in the "United Colonies" to regulate the price of salt, but no bounty was granted for its manufacture.[28]

In September of 1776, Governor Trumbull of Connecticut wrote to Congress urging the necessity of salt for curing provisions for the army.[29] In order to procure this much needed supply, Congress requested the Pennsylvania Council of Safety to sell a part of their salt for the use of the army.[30]

In the latter part of 1776 and in 1777, Congress again endeavored to promote the domestic manufacture of salt. In November of 1776, Congress sent a letter to Governor Livingston of New York asking him to send two companies of militia to guard the salt works "near Tom's River."[31]

In April of 1777, Congress sent a request to the governor and council of New Jersey asking that they exempt from the militia forty men who were employed in the salt works being carried on in New Jersey by the government of Pennsylvania.[32]

On June 13, 1777, after hearing a report by the "Committee on Ways and Means of Securing Salt" a resolution

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28. Ibid., 404.
29. Joseph Trumbull to the President of Congress, Sept. 19, 1776, Force, op. cit., Fifth Series, II, 1338.
30. Journals, VI, 906.
31. Ibid., 925-926.
32. Ibid., VII, 244.

was passed requesting the several states to "erect and encourage, in the most liberal and effectual manner," works for the making of salt.[33]

In December of 1776, Congress asked the Pennsylvania Council of Safety to remove "all restraint upon the sale of salt," and to give public notice that any person might import and sell salt at any price which he could command.[34] Nevertheless, the want of salt felt by the army and the colonists throughout the years 1777 and 1778 was in the "extremest degree."[35]

Congress resorted to still other means for procuring salt. In January of 1778, Congress directed the governor of Maryland to seize a shipload of salt belonging to a New York loyalist, and ordered that it be delivered to the commissary of purchases.[36] In 1780 there was a dispute as to whether five thousand bushels of salt lodged in the public magazines in Massachusetts belonged to the Congress or to Mr. Livingston. Livingston was being held as a prisoner of war in Charleston at the time. Congress decided in October to have the commissary general take the salt for public use, and deferred a settlement of the claims to a later date.[37]

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33. Ibid., VIII, 464.
34. Ibid., VI, 1014-1015.
35. The President of Congress (Henry Laurens) to Samuel and Robert Purviance, Jan. 12, 1778, Burnett, III, 27; Journals, XVIII, 980.
36. Ibid., X, 43.
37. Ibid., XVIII, 980.

It seems that reliance was placed largely on importation for procuring salt during the latter part of the war. In February of 1779, a Mr. Palmer wrote to Congress desiring aid from that body in making "bay salt."[38] Congress gave him no assistance, however, but referred his plans to the assembly of Massachusetts.[39] In the latter part of the same year, Congress appointed a committee to negotiate with Spain concerning the importation of salt.[40] Considerable quantities of salt were imported, relieving, to a large extent, the earlier intense need for this commodity.[41]

While the domestic manufacture of salt was of considerable value to the colonists during the Revolution, it did not develop into an important, permanent industry, as did the manufacture of powder.[42] The salt industry during the Revolution depended on sea water, while the extensive salt manufactures which developed in the United States during the early part of the nineteenth century were located chiefly in the vicinity of inland salt-wells.[43]

During the Revolution, Congress and the individual colonies sought to promote the manufacture of commodities other than clothing, arms, munitions, and salt.

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38. Ibid., XIII, 319.
39. Ibid., XIV, 786.
40. Ibid., XV, 1140-1141.
41. Clark, op. cit., 223.
42. Ibid., 315.
43. Ibid., 223.

In September of 1775, North Carolina offered a premium of two hundred fifty pounds for the first paper mill to be set up in the colony within the succeeding eighteen months.[44] In November of the same year, South Carolina promised a bounty of five hundred pounds to the person establishing the first paper mill in the colony.[45]

Tents were, of course, badly needed by the American armies, and efforts were made to promote their manufacture. On August 6, 1776, the Maryland Convention authorized the Council of Safety to contract for the making of tents in the colony.[46] A few days later, the Congress ordered that the duck cloth in Rhode Island be made into tents and forwarded to General Washington.[47] On the same day, Congress directed Mr. Mease, clothier-general, to purchase all the linen in Philadelphia and have it made into tents "as soon as possible."[48] On September 4, 1776, Mr. Mease reported that only a small amount of sail cloth in the city was suitable for making tents. Congress directed him to have this amount made up, and ordered the continental agents to buy all the duck and "other cloth fit for tents" in the eastern states.[49]

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44. Saunders, op. cit., X, 217-218.
45. Force, op. cit., 72.
46. Force, op. cit., Fifth Series, I, 1349.
47. Journals, V, 718.
48. Ibid., 719.
49. Ibid., 735.

In the fall of 1777, Congress made an effort to have flour manufactured for the use of the army. Due to the difficulty in securing flour, in November of 1777, Congress appointed a committee to hire twelve "or more" mills for making flour for the army.[50] It appears, however, that no other efforts were made by the Congress to promote the manufacture of this commodity.

It seems that the efforts of Congress to promote manufacturing in the colonies were fairly successful. The measures adopted by the Congress and the governing bodies of the various colonies to encourage manufacturing provided a considerable impetus to domestic industries. It appears that the greatest degree of success was attained in the field of arms and munitions manufactures, due largely, no doubt, to the fact that more attention was given to this phase of industry than to any other. Ten years after the close of the Revolutionary war, there were twenty-one powder mills operating in Pennsylvania.[51] It must be remembered that a large part of the saltpetre and powder produced in the colonies was made as a result of the support given by the new state governments. Nevertheless, much of this state support, not only in the making of munitions, but in the

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50. Ibid., IX, 961-962.
51. Orlando W. Stephenson, "The Supply of Gunpowder in 1776," The American Historical Review, XXX, 274, Jan. 1925.

production of other commodities as well, was the result of solicitation by the Continental Congress.[52]

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52. Kathleen Bruce, Virginia Iron Manufacture in the Slave Era, 24.

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