

# “Light the Match Load Away”: The Ordnance and Organizational Structure of the Philadelphia Artillery, 1747–1777

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On 12 April 1748, Philadelphian John Swift trumpeted the Military Association of Philadelphia in a letter to his uncle. “The association,” he wrote, “goes on very well here, there are upwards of eight hundred men in this city, that bear arms, and are already become pretty expert in the exercise. The platform for a battery is begun by the swamp below Swedes’ church, and we have cannon coming to us from New York, viz: twelve twelve-pounders, and two eighteen-pounders, which are to serve till we can be better provided.”<sup>1</sup> An Associator himself, Swift had good cause to be boastful. In a matter of months, the Association had grown from a few hundred pledges to a field force complete with forts, cannon, and small arms. Swift’s words moreover summed up the nature of the Military Association. Philadelphians had taken it upon themselves to provide a trained force and military education in defiance of Pennsylvania’s nondefense policy. The Associators would continue to do so until Pennsylvania passed a binding militia law on 17 March 1777. The unique status of the Military Association begs a closer look at its origins, organization, equipment, and training.

Two disastrous military campaigns demonstrated the need for just such a cadre of trained experts. The first, an expedition to Cartagena in 1740, involved roughly 3,500 provincials, including about 800 Pennsylvanians. The second, to New York in 1746, involved only about 400 Pennsylvanians, but included several influential men who publicized the disastrous effects of sending untrained, ill-equipped recruits into battle, including Benjamin Franklin’s eldest son, William.

Because their colony lacked a militia law, the Pennsylvanians who enlisted for the Cartagena Expedition could expect little in the way of training or equipment. The weapons the crown supplied were most likely contract muskets, lighter and less sturdy copies of the land pattern.<sup>2</sup> Their uniforms—red regimental coats faced green, red waistcoats, brown fustian breeches, gray ribbed stockings, and “English shoes”—were generally inferior to those supplied regular troops.<sup>3</sup> Pennsylvania troops fared little better during 1746, making do with secondhand contract muskets, or obsolete dog locks, belly



boxes, and bayonet frogs instead of shoulder pouches and scabbards.<sup>4</sup>

Dog locks made the manual of arms difficult to manage. The Cutlasses issued, possibly to remedy an insufficient quantity of bayonets, were equally unwieldy compared to the hangers issued to regular soldiers, not to mention the tomahawks carried by their opposite numbers in the Canadian militia.<sup>5</sup>

The levies were poorly organized. Neither expedition had a Philadelphia officer higher in rank than a captain. The officers and men of the four independent companies lacked any kind of organic headquarters and had to rely on the goodwill of other colonies when logistical or payroll problems arose.<sup>6</sup>

Even the levies’ training was hasty and improvised. Because Pennsylvania required no drill, the ministry ordered Colonel William Blakeney and several lieutenants to Philadelphia to turn the civilians into soldiers.<sup>7</sup> Blakeney penned a simplified version of Humphrey Bland’s *Treatise of Military Discipline* for the levies, cutting out several steps in the manual of arms.<sup>8</sup> At the unit level, Blakeney provided instruction in platoon fire. Platoon fire in turn put the onus of maneuver back on the company commanders, six of whom in 1740 lacked previous military service.<sup>9</sup> With less than one month’s training, the seven Philadelphia companies “performed their Exercise to Admiration” and boarded transports to the West Indies

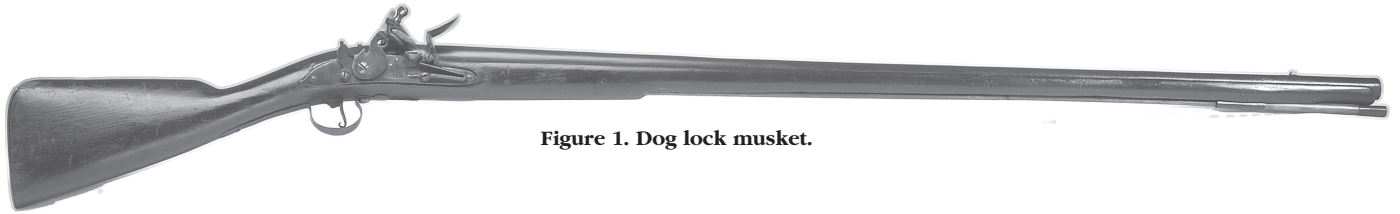


Figure 1. Dog lock musket.



Figure 2. Belly box.

and colony alike expected them to soldier under the same conditions as any other soldiers. Yet Pennsylvania denied them the tools and the training to do the job. At a time when professional soldiers required a minimum of three months' annual training, the levies shipped out with as many weeks instruction.<sup>15</sup> Provincial soldiers elsewhere could expect their colony to supply decent weapons—Pennsylvanians could not.<sup>16</sup> The failures of the Cartagena and Canada expeditions understandably filled

in September, at the height of the yellow fever season.<sup>10</sup>

Despite its shortcomings, Blakeney's was at least a standard. Blakeney additionally saw to it that many Philadelphians learned his *Exercise*, and Philadelphia printer Benjamin Franklin ensured that multiple printings made the manual readily available for military students.<sup>11</sup> Blakeney promoted promising young recruits to stay behind and instruct drill to the replacements that a campaign to the disease-ridden Caribbean would require.

One of these recruits was Benjamin Loxley. Born in Wakefield, Yorkshire, England, on 20 December 1720, Loxley sailed to Philadelphia with his uncle at the age of fourteen.<sup>12</sup> In 1737, he apprenticed to carpenter Joseph Watkins in nearby Darby. By the time he enlisted in the Pennsylvania levies, Loxley was already a journeyman carpenter plying his trade in Philadelphia.<sup>13</sup> Loxley first learned Blakeney's *Exercise* in 1742 and trained recruits for the rest of the war.<sup>14</sup> The Philadelphia carpenter would donate the next thirty years serving his adopted city.

To Loxley and others, the lessons of Cartagena and a winter spent in New York were evident. Several hundred Pennsylvanians from Philadelphia and the eastern counties served in the Cartagena and Canada expedition, where crown

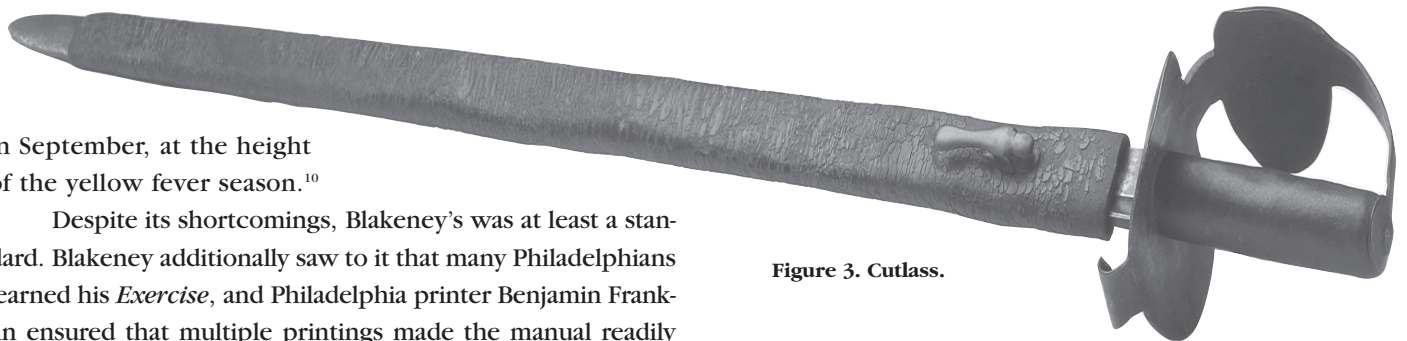


Figure 3. Cutlass.

regular army planners with contempt for the provincial soldiery and embittered the colonials.

This was certainly no way to win a war, and war remained a preeminent fact of life in the 18th century. The crown would undoubtedly call for recruit quotas in the near future, and Pennsylvania needed a mechanism for training its soldiers. A militia was out of the question. It threatened the incumbent Old Party, a loose coalition of like-minded religions, merchants, and land barons, since militia service often served as a bridge to civil office. The cash-strapped but land-wealthy Penn family, long in contention with the Old Party over money issues, could use militia rank to reward political allies. The Penn-Old Party logjam posed an opportunity in the making for a Philadelphian with the energy, the ambition, and the savvy to seize it.

Benjamin Franklin was that man. Even before the four Pennsylvania companies returned from New York, the Philadelphia printer took action.<sup>17</sup> As publisher of a major

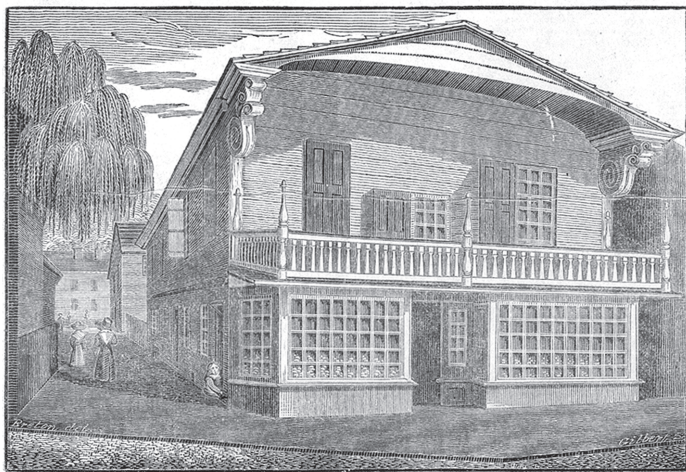


Figure 4. Loxley House.

newspaper and clerk of the Pennsylvania Assembly, Franklin was a political insider with his own press corps.<sup>18</sup> On 17 November 1747, he published *Plain Truth: Or Serious Considerations on the Present State of the City of Philadelphia and Province of Pennsylvania*.<sup>19</sup> *Plain Truth* spoke to Philadelphians who drew their living from maritime trades, to say nothing of veterans of the two expeditions, privateers, and defense proponents.<sup>20</sup> Franklin called on Pennsylvanians to unite in defense of their colony.<sup>21</sup>

On 21 November 1747, Franklin showed his proposal to “150 Persons, mostly Tradesmen” gathered at a Mr. Walton’s schoolhouse.<sup>22</sup> Over the next several nights, crowds gathered at important mercantile establishments to show their support for Franklin’s proposal.<sup>23</sup>

In joining the Association, would-be soldiers accepted the Articles of Association.<sup>24</sup> The articles addressed many of the shortcomings of the recent expeditions.<sup>25</sup> Article Two, for example, organized the Association into companies consisting of 50 to 100 men each.<sup>26</sup> Article Three provided for the election of officers, subject to approval by the governor or the President of the Executive Council.<sup>27</sup> Article Four organized the companies into a regiment.<sup>28</sup> Article Five established a quarterly training schedule.<sup>29</sup> Article Six created a “General Military Council,” consisting of four Associators from each county, who would establish training and doctrine.<sup>30</sup> The Articles of Association guaranteed that Philadelphia’s defense was now reasonably well organized and equipped.

The Associated Regiment of Foot first paraded in front of Philadelphia’s two centers of power, the Meeting House and Court House, on 7 December 1747. Apart from its voluntary nature, the new organization appeared no different from any county militia regiment. Indeed, Article One, which required each Associator to provide himself only with a firelock and twelve cartridges, seemed copied from a militia law dating to the time of Oliver Cromwell,

when soldiers fought with matchlocks and pikes. The 600 Associators that formed under arms divided into eleven companies by ward or township just as a county regiment would do in Virginia or New England.<sup>31</sup> Pennsylvania commissioned the officers and legitimized the Association. However, here the similarity ended. In marked contrast to a county regiment, the Associators flaunted their wealth: each company marched under its own silk standard and each Associator shouldered his own privately purchased musket or fowling piece.<sup>34</sup> Unlike militias elsewhere, the Articles of Association contained no provision to supply arms to those who lacked them: the Associators admitted only those who could arm themselves.<sup>35</sup>

The Military Association was not a militia in the true sense of the word. In a radical departure from traditional militia laws, Article Seven limited the Association to voluntary funding only.<sup>36</sup> Article Eight stated that the Association was to last for the war or until the colony was provided with an adequate defense.<sup>37</sup> These two articles would characterize the Association throughout its active life. Philadelphians like John Swift would voice the concept in private correspondence, and subsequent Associations would rarely fail to insert similar wording when petitioning the province for recognition.<sup>38</sup>

The Associators soon tightened some of the requirements laid out in the original Articles. The General Council ordered training stepped up to a weekly drill and Associators to purchase bayonets for their firelocks.<sup>39</sup> Benjamin Loxley and other skilled soldiers trained them in Blakeney’s *Exercise*.

While prominent Philadelphians paraded with the Regiment of Foot and boasted of their growing military prowess, the Philadelphia Artillery set to work building a fort.<sup>40</sup> A fort would provide soldiers in Philadelphia a place to train and a visible rallying point. Associator leadership knew that the best location for a fort was near the mouth of the Schuylkill River, several miles south of the city.<sup>41</sup> The General Council instead chose a spot at the foot of Lombard Street, at Mayor William Atwood’s wharf, where Windmill Island protected the mouth of nearby Dock Creek, creating a small natural harbor known as the Dock.

The Associator fort would not be Philadelphia’s first fort or even its first fort near that spot.<sup>42</sup> As early as 1729, under a tall flagpole capped by a triangular finial festooned with nine cannon, gunners regularly fired official salutes from this small earthwork, on state holidays, or upon the arrival of an important dignitary.<sup>43</sup> By 1747, this fort had evidently ceased to exist, or was at any rate obsolete. Associators chose nearby Atwood’s Wharf.

The fort needed cannon. After New York’s Governor George Clinton denied their request for ordnance, Franklin intervened with a case of Madeira and secured the loan of a



Figure 5. Prospect of Philadelphia, G. Wood. Wood's Prospect shows the small fort and tall flag pole outside Philadelphia's harbor.

dozen guns.<sup>44</sup> These were relatively small six- and nine-pound weapons that would have little effect on enemy warships. Undeterred, Franklin and the officers of the Association continued to seek more artillery, ranging as far afield as Jamaica to petition for cannon.<sup>45</sup> Association members worked directly with the Executive Council to procure ordnance, signing their names to the same documents and sitting in on Council sessions. Such actions were hallmarks of the publicly funded, privately organized Military Association.

Attendance at Council meetings would not purchase the cannon the Associators sought. On 8 February 1748, Franklin organized a lottery to purchase cannon from New York and build the fort, which Associator carpenters built in two days.<sup>46</sup> George Noarth, a prominent seacaptain, became its first commander.<sup>47</sup> The fort mounted only fourteen guns and was moreover poorly located: Windmill Island partially masked its guns. Work began on a second, larger battery.

If attendance at Council sessions would not purchase cannon, it did bear other fruit. On 26 May 1748, the Executive Council passed a resolution to fund a stone fort already under construction at Wiccacoe, near Old Swedes Church south of the city.<sup>48</sup>

The new fort, like the Articles of Association, seemed to be a mix of political and military expediency. Known at first as the Association Battery, supporters soon began referring to it as the "Grand" Battery, no doubt a reference to the recently captured work at Fortress Louisbourg.<sup>49</sup> The Association located the battery at a more commanding location on the Delaware, but the new fort lacked the *glacis* and *ravelins* necessary to withstand a prolonged attack. With a maximum range between 900 and 1,200 yards, the fort's 27 twelve- and eighteen-pound cannon were large enough to deter an enemy warship, but the Delaware River is over a half a mile wide at Wiccacoe, and most of the new fort's guns were worn-out castoffs, with ballistics that were by no means up to snuff.<sup>50</sup> The Grand Battery's armament would have been largely ineffective in a naval battle.

Franklin was well aware of the importance of this or any fort's location, and that this fort needed to be visible.<sup>51</sup> At this location, the 400-foot fort was indeed visible to the point that ships approaching the city likely used it as a navigational aid.

On May 26, 1748, the Association commissioned Abraham Taylor colonel and commander of both batteries.<sup>52</sup> On the same day, a motion in the Executive Council recommended the creation of a strong guard at both batteries, for ten men to guard the public powder house in the city, and for pilot boats to patrol the river and bay for intelligence regarding enemy activities.<sup>53</sup> At the Association's urging, Pennsylvania commissioned Thomas Lawrence's *Le Trembleur*, a handy fourteen-gun Bermuda sloop, to patrol the Delaware River and Bay.<sup>54</sup> In June 1748, Taylor and Lawrence recommended forming an artillery company. The Executive Council commissioned sometime privateer John Sibbald to command the Grand Battery.<sup>55</sup>

News soon reached Philadelphia of the Peace of Aix-La Chapelle, abating the war fever of the winter, spring, and early summer. As Associators returned to their civilian routines, a stock company administered the Military Association and managed private donations.<sup>56</sup> One such donation was the 32-pound Schuylkill Gun, a 1750 contribution of the Colony in Schuylkill. The only piece of Associator ordnance currently known to exist, the Schuylkill Gun has this unique inscription: KWANIO NEE KHETEERU, Lenape for "This is My Right, I will defend it," and a crown over the letters W. P.<sup>57</sup> This monster could command the river in a way that its smaller mates could not.

The peace did not last. In October 1754, as tensions mounted in western Pennsylvania following George Washington's surrender of Fort Necessity that summer, the *Pennsylvania Gazette* announced that "a sergeant and Corporal of each Company in the Train of Artillery are ordered to go a Recruiting."<sup>58</sup> Benjamin Loxley recalled years later how "a great number of Tradesmen, Carpenters, Masons, Smiths, etc. met at our State House and chose old

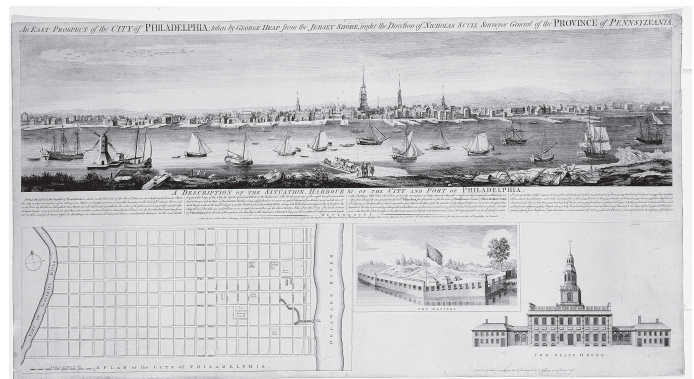


Figure 6. Association Battery. The Scull and Heap map shows the Grand Battery surmounted by a Union Jack, and a map of the city showing the location of the Dock, but understates the size of Windmill Island.



Figure 7. Schuylkill gun.

George North Captain and myself Captain-Lieutenant and John Goodwin 1st Lieut. and James Worrel 2nd Lieut. We chose all our under officers and formed a company of 107 men, officers included.”<sup>59</sup> Loxley then borrowed four guns from Philadelphia shipowner Andrew Hodge and modified them for field use.<sup>60</sup>

In late August 1755, following news of Braddock’s defeat at the Battle of the Monongahela, managers of the Association stock voted funds to repair the Grand Battery and for an additional 1,000 small arms and ammunition for the Associators’ use.<sup>61</sup> As opposed to earlier shipments of outdated dog lock muskets, these muskets were more likely of a newer design, though made by contractors and not approved by the Board of Ordnance. The only Land Pattern arms in the Pennsylvania arsenal were 600 muskets borrowed from Boston.<sup>62</sup>

Individual Associators volunteered for service. Captain Harry Gordon of the Royal Engineers “and sundry other of Braddock’s defeated men” taught Benjamin Loxley gunnery, laboratory work, and bombardment.<sup>63</sup>

In addition to the 1,000 small arms, the Managers of the Association approached Governor William Denny to order two 12-pound field pieces, two 6-pound field pieces, 1 eight-inch mortar on a bed, 100 shells, and accompanying tools and fittings directly from the Board of Ordnance.<sup>64</sup> In addition to the cannon, the Associators ordered 112 artillery carbines with bayonets and accoutrements for the artillery.<sup>65</sup> One of the six pounders was made by Andrew Schalch in 1747. It weighed 560 pounds and bore a crown and the letter M, for Earl Montegu, the Master General of Ordnance at the time the gun was made.<sup>66</sup> Properly equipped, Loxley taught “great numbers of militia, both officers and men, in the use of the cannon and small arms.”<sup>67</sup>

The 6- and 12-pound cannon were too large for wilderness use. A light 6-pounder alone required two large horses to

draw, and a 12-pounder required three horses.<sup>68</sup> A three- or a four-pound gun on the other hand, required only one horse.<sup>69</sup> Weight was a fundamental consideration in the American forest, where good roads and grassy forage for draft animals were scarce, as were horses large enough to draw them.<sup>70</sup> For that reason, three- and four-pound guns were more commonly used by the field artillery, especially over the bad roads and rough terrain found in Pennsylvania. The Associators’ purchase of heavier ordnance indicates that the new artillery company was intended for the defense of the river, not for an expedition to the west.

In late 1755, Governor Robert Hunter Morris persuaded the Assembly to organize a militia. The Militia Act of 1755 attempted to compromise the Old Party platform with the rising power of the antiproprietary party by creating a voluntary standing force. Militia opponents watered down the bill to the extent that the resulting all-volunteer force could only be mobilized for brief periods close to home. That such limitations would be so impractical as to render any militia a useless defense was not lost on the Assembly, which soon passed the more pragmatic Supply Act, authorizing a chain of frontier forts and full-time garrisons to man them. Nor was the exclusive nature of the law lost on King George II. The King vetoed the law almost as soon as it arrived at Windsor, on the grounds that it exempted too many Pennsylvanians from service.

With political pressure on the proprietary government mounting, Thomas Penn recalled Robert Hunter Morris and appointed William Denny, a solid military man, to be Pennsylvania’s lieutenant governor.<sup>71</sup> The Pennsylvania Assembly passed a more binding militia law on 29 March 1757 that addressed many of the concerns raised by the Articles of Association while respecting the sensibilities of Pennsylvania pacifists.<sup>72</sup> The act automatically expired at the end of the term of the sitting Assembly.<sup>73</sup>

The Associators quickly capitalized on Penn’s decision by ordering more arms and organizing more training. At the time of the 1757 Militia Law, Pennsylvania’s arsenal consisted of 29 pieces of ordnance, 14 swivels, 4,091 muskets, 710 tomahawks, 66 pistols, 13 wall pieces, and 68 cutlasses.<sup>74</sup> The province additionally stored a large quantity of lead, powder, and flints. Of these weapons, 880 were contract muskets owned by the Association, which also owned seven casks of powder, five artillery pieces, and the 112 Pattern 1756 Artillery Carbines ordered from the Board of Ordnance, for a total of 1,002 small arms. Benjamin Franklin drew 3,000 flints from the province, presumably for the northern frontier junket he took in the autumn of that year.<sup>75</sup> With the

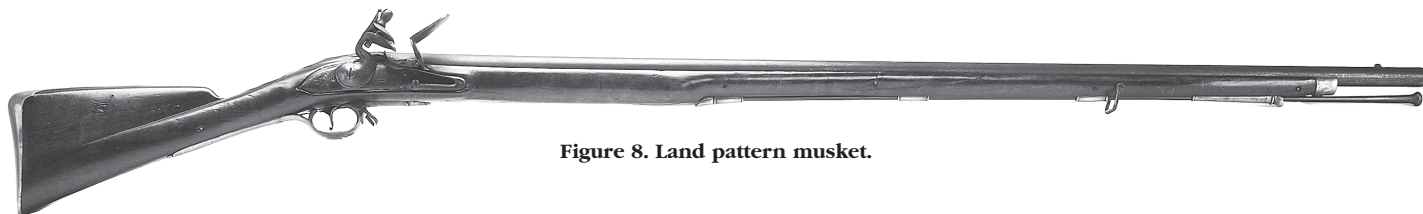


Figure 8. Land pattern musket.

exception of the 112 carbines, Pennsylvania did not record any bayonets or cartridge boxes.

The Associators showcased their skills with the new arms throughout 1756. On 17 March, the *Pennsylvania Gazette* reported that a mounted Benjamin Franklin led more than 600 members of the Associated Regiment of Foot through the city to one of the market squares. There, they demonstrated their martial skills “according to the manner of Street Firing.”<sup>76</sup> The regiment then marched through the heart of the city, with colors flying and the band playing, past the governor’s house and on to the courthouse. Behind Franklin came two companies of artillery, three divisions of infantry, and a pioneer detachment.

On 14 May, the Associators repeated the performance in Germantown.<sup>77</sup> This time, Loxley positioned his guns on the flanks of the regiment, firing alternately.<sup>78</sup> Braddock’s defeated officers had most likely taught Loxley the tactic, which is described in Muller’s *Treatise of Artillery*.

Loxley trained his men in gunnery and the use of small arms, no doubt relying once again on *Blakeney’s Exercise* and Muller.<sup>79</sup> As a member of the Library Company, Loxley certainly would have had as much access to published materials as anyone else in the city, and there is some evidence that he and other Associators began to study other drill manuals and apply them to their training.<sup>80</sup> In early April, the *Pennsylvania Gazette* noted that “the Philadelphia Artillery Company fired one of their Cannon ten times in less than a Minute.”<sup>81</sup> Philadelphia artillerists accomplished this high rate of fire by fashioning cartridges out of lead or tin, instead of the flannel that was the standard practice in the Royal Artillery.<sup>82</sup> The regiment, which consisted of an honorary colonel, lieutenant colonel, major, regimental staff, a band of

Use of Arms more universal, and the Province more secure.”<sup>84</sup> The day after the *Pennsylvania Gazette* announced the Associators’ formal reception of Governor Denny, it announced that they had opened a military academy. The Associator academy offered instruction in three branches: horse, foot, and “the Artillery Exercise belonging to the old Association Battery.”<sup>85</sup>

No laws constrained the Philadelphia Artillery from carrying out training.<sup>86</sup> Indeed, by law, should “any Number of Men, in or near the City of Philadelphia,” form a company or companies, “for managing the Artillery belonging to the Province, and the Battery or Fort near the said City,” they need only drill on the same days as the foot regiments, something they had already been doing.<sup>87</sup> The law specifically directed that “nothing herein contained shall be construed to affect, alter, change, or take away the right and title of the private owners of the Soil on which the said Battery or Fort is erected.”<sup>88</sup> The Associator Artillery stored its guns in wooden sheds on either side of the State House.<sup>89</sup> Even within the constraints of the militia law, the train of artillery remained an autonomous and distinct structure, its forts privately owned, its equipment publicly maintained, and its officers and men answerable only to the governor or military commander.

Associators additionally improved Philadelphia’s fixed defenses. By the end of 1756, the Grand Battery mounted the 32-pound Schuylkill Gun, four 24 pounders, and twenty-five 18 pounders.<sup>90</sup> Associators also stored four 18 pounders, nine 12 pounders, six 9 pounders, and three 6 pounders at the fort. The Associators stockpiled a large quantity of solid shot, including grape and bar shot for the Schuylkill Gun and the 18 and 24 pounders, plus bar shot for the 18 and 24 pounders. The Grand Battery housed copper measures, cartridge cases, ladles and sponges, day and evening lanterns,

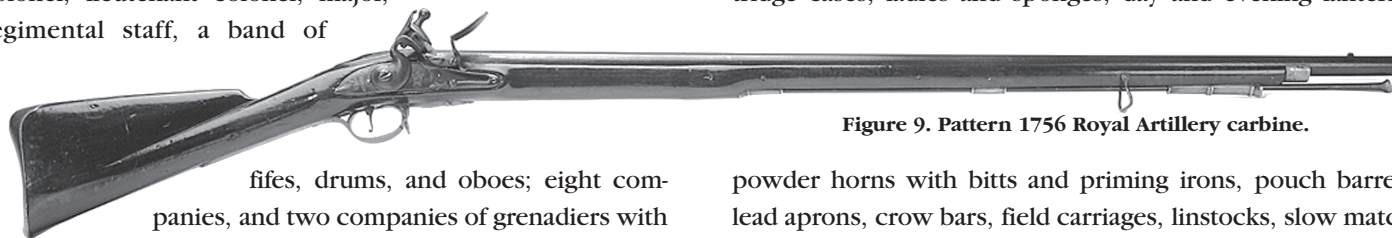


Figure 9. Pattern 1756 Royal Artillery carbine.

fifes, drums, and oboes; eight companies, and two companies of grenadiers with attached pioneers, looked more like a Prussian organization than the British regiment described by Bland.<sup>83</sup> The “manner of street firing” moreover appeared to come straight from the most recent Prussian drill manual.

True to their mandate, the Association fielded a trained body of experts who served as an “Expedient for rendering the

powder horns with bits and priming irons, pouch barrels, lead aprons, crow bars, field carriages, linstocks, slow match, and wads. Ships sailing up the Delaware River could see the Union Jack that flew over fort’s walls a great way downriver.”<sup>91</sup>

Pennsylvania intended that either the Royal Artillery or the paroled 35th (Otway’s) Regiment of Foot—billeted in Philadelphia after their surrender at Fort William Henry in July 1757—garrison the Battery, but allowed Associators to man

the fort when no garrison was available.<sup>92</sup> The Executive Council commissioned Captain Samuel Mifflin, the fort's commander, and authorized a Captain-Lieutenant, a gunner, two sergeants, two corporals, a drummer, and 36 privates. Though the province offered to pay the garrison the handsome sum of two shillings each day for sergeants, one shilling, nine pence for corporals, two shillings, nine pence for drummers, and privates one shilling six pence, plus five shillings per week for subsistence, such a salary could hardly entice Mifflin's company, composed as it was of some of the wealthiest men in the city, including the sitting mayor of Philadelphia, one of the largest landowners in Pennsylvania, and leading gentlemen, merchants, shipwrights, and privateers.<sup>93</sup>

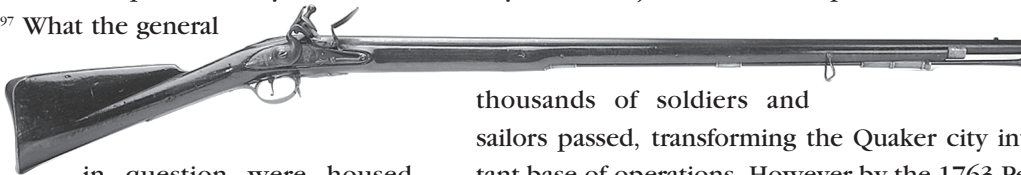
From the spring of 1758 up to the start of the Revolutionary War, Benjamin Loxley wore three hats. First and foremost a leading carpenter, Loxley also commanded the artillery and served as province storekeeper.<sup>94</sup> This last office was the direct result of a controversy surrounding the 112 artillery carbines, the Cherokee nation, and Brigadier General John Forbes.

Shortly after his arrival on 14 April 1758 to lead the expedition against Fort Duquesne, General Forbes endeavored to secure "three hundred Light Fuzees" to send to the Cherokees then gathered at Winchester, Virginia.<sup>95</sup> He was pleased to find Governor Denny favorably disposed to his upcoming expedition and the Assembly eager to pass a money bill allowing for the transfer of these and other arms.

The expedition would require tight coordination between crown, colonial, and native governments. The latter could and did expect powder, shot, and firearms. No ordinary land pattern arms would do. On 20 April Forbes informed Governor Denny that "I am under the necessity of requiring your Honour that you will give orders for delivering to me Two Hundred and Eighteen Light Fuzees, which are in your Store, as likewise as many of the 165 Arms as are found to be serviceable after they are Surveyed."<sup>96</sup>

The fusils to which Forbes referred included the 112 carbines belonging to Captain Noarth's artillery company and a stand of side-swivel carbines purchased by the Association in 1747.<sup>97</sup> What the general

could not understand was the peculiar fact that, though the arms



in question were housed within feet of the Pennsylvania State House, the very building in which the province deliberated over public matters, they were the property of the train of artillery and not the province. Denny justifiably balked at surrendering those arms to Forbes and the regular army.

Then, according to Loxley, a delegation of Associator officers approached General Forbes and informed him that

Loxley knew laboratory work, artillery duty, and military stores.<sup>98</sup> On the 21st, General Forbes sent Harry Gordon of the Royal Engineers and Henry Ward, Clerk of Stores for the Royal Artillery in Philadelphia, to fetch Loxley for an interview.<sup>99</sup> After the interview with the general, Forbes placed him in charge of the King's stores at Philadelphia with instructions to issue ordnance to no one but himself, Major General James Abercromby, or Governor Denny.<sup>100</sup>

A few days after the interview, a relieved Forbes wrote Abercromby that "the Governour has sent me the 218 Fuzees as he has taken the Keys of the Province Magazines into his own hands."<sup>101</sup> By dealing directly with Governor Denny and Brigadier Forbes, the Associators had bypassed the Assembly and created the Storekeeper of the Province. The Storekeeper would answer only to regular military authorities or to the governors of the respective colonies, who were incidentally captains-general of their respective militias. The Associators had won yet another important political battle. The Philadelphia Artillery continued to serve both the King and its own constituency without abdicating its sovereignty.

Loxley took to his new job with enthusiasm. On May 4, 1758, he produced a complete return of the ordnance in Pennsylvania with the help of Royal Artillery Captain Lieutenant David Hay.<sup>102</sup> The list included arms stored at the State House. Four 4-pounders, two 6-pounders, two 12-pounders, fifteen 18-pounders, and one 8-inch mortar, all belonging to the Association, were now out of the control of the Assembly and at the disposal of the British Army, if necessary.

More importantly, Loxley's installation freed General Forbes to concentrate on the more pressing matter of evicting the French from the Forks of the Ohio. Thereafter, Hay and Loxley often worked together maintaining Pennsylvania's military inventory.

The Seven Years' War brought the Philadelphia Associators into the forefront as military contractors, instructors, and trusted armorers. Associators had helped turn their city into a major embarkation point for western campaigns

through which thousands of soldiers and sailors passed, transforming the Quaker city into an important base of operations. However by the 1763 Peace of Paris, the Associators had yet to muster in the defense of their city. All that would change in 1764, and the source of the threat would be surprising.

On 4 February 1764, Governor John Penn activated the Associated Regiment of Foot, a troop of light horse, and the train of artillery to face the approach of a frontier mob known as the Paxton Boys. The Associators headquartered

themselves at Benjamin Franklin's house, where they brushed off uniforms and checked muskets and halberds for rust.<sup>105</sup> Loxley donned his well-worn regimental coat and ordered out 12 cannon.<sup>104</sup> The Associators then formed ranks, unfurled their old silk standards, and proceeded to the Court House.<sup>105</sup> Arms were stored there, and the open area, flanked as it was by the Market, the Coffee House, and the big Friends' Meeting House, was a natural forum for the people of Philadelphia that the Association intended to turn into a fort. With the help of Redcoats from the nearby barracks, Associators spent the next day barricading streets.<sup>106</sup> City residents set candles in their windows to help illuminate drizzly streets, and Loxley ordered his cannon loaded with grapeshot.<sup>107</sup> All through that day and night, Associators stood side by side with the regulars guarding the city.<sup>108</sup>

Franklin meanwhile met the leaders of the mob and negotiated a settlement. The immediate outcome of the standoff and "pamphlet war" it provoked, apart from political defeat for Franklin and ridicule of the Associators, was minimal.<sup>109</sup> Its long-term consequences were more profound.<sup>110</sup> The incident demonstrated how out of step Pennsylvania's leadership was with the views of the colony's population, and change was in the air.

The artillery's relationship with the regulars was in a similar state of transition. The year before, the British Army ceded control of its military hardware back to Pennsylvania and it stopped paying Loxley his annual stipend.<sup>111</sup> The British officers likely considered Pennsylvania's four brass guns and eight-inch mortar to be British property. Loxley was able to save all but the mortar, which the British spirited away in secret.<sup>112</sup> Loxley thereafter labored to keep Pennsylvania's arsenal out of the hands of the British in a rapidly changing world. On 4 June 1766, the Philadelphia Artillery fired a salute in celebration of King George III's birthday.<sup>113</sup> Less than two years later, the guns of the artillery helped celebrate the repeal of one of the hated Townshend Duties.<sup>114</sup>

A staunch Whig like most artillerists, Loxley transferred Pennsylvania's remaining stores over to his direct control. A 16 May 1772 entry of £36.14.0 in his ledger marked the settlement of his account with the Royal Artillery for items he had sold to Hay and, on 26 December, Hay delivered two old swords from the Royal Artillery stores.<sup>115</sup> That same day, Loxley refurbished several cannon for the province.<sup>116</sup> On 28 January 1773, Loxley received Pennsylvania's four brass cannon at the State House storage sheds.<sup>117</sup>

The elections of 1774 swept Philadelphia's revolutionaries into power.<sup>118</sup> The last British regulars, elements of the 18th (Royal Irish) Regiment of Foot, left the city earlier that year as General Gage concentrated forces in Boston to enforce the Coercive Acts. The Philadelphia Artillery stepped up its training, helping to organize training companies to face the redcoats who had so recently been their comrades in arms.<sup>119</sup>

When his neighbors elected him to the local Committee of Safety in 1775, Loxley's choice was clear: "King George had broken his coronation oath with us, wherein we engaged to protect all his subjects in free liberty of conscience and lawful rights, and now he had broken his promise and we were free from ours."<sup>120</sup> By the spring of 1775, training companies organized the winter before expanded into battalions.

News of the Battles of Lexington and Concord galvanized the city. In May 1775 Philadelphia Associators organized three infantry battalions numbered 1st to 3rd, one rifle battalion, and one artillery battalion for a total of five battalions.<sup>121</sup> The Associators organized the 4th Foot Battalion sometime between late 1775 and early 1776.<sup>122</sup> The battalions were organized into four companies, one of which usually consisted of a veter-

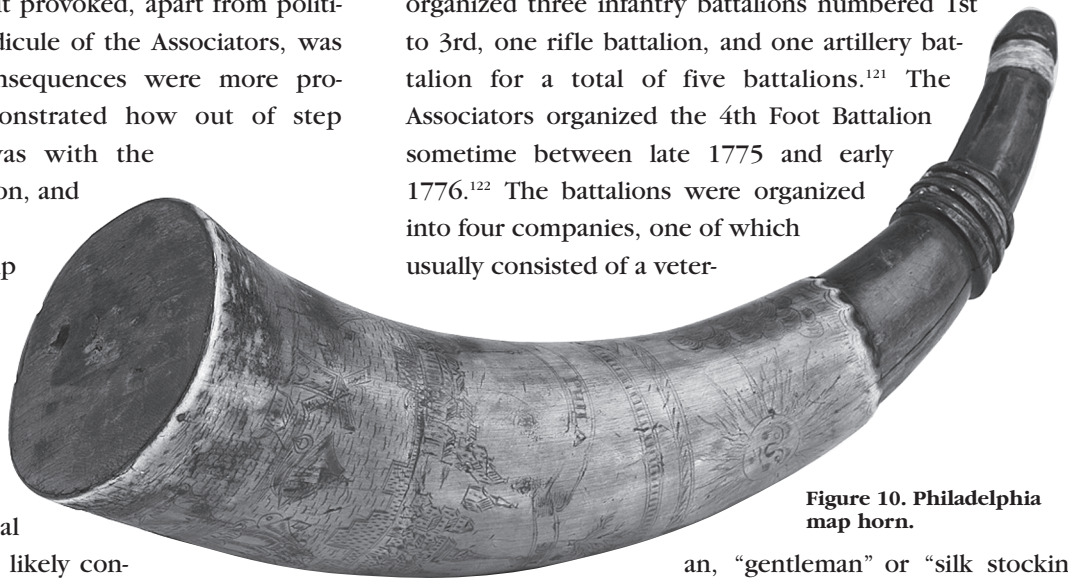


Figure 10. Philadelphia map horn.

an, "gentleman" or "silk stocking" company, and the others as "boys" or student companies.<sup>123</sup> In the artillery, Benjamin Loxley commanded 174 men of the 1st Company of the Artillery Battalion. They were mostly officers and men who had been with the artillery since 1755.<sup>124</sup> Joseph Moulder commanded the 2nd Company, James Biddle, the 3rd Company, and Thomas Procter, the 4th Company.<sup>125</sup> Samuel Mifflin, the senior officer now promoted to major, commanded the battalion.<sup>126</sup>

The Philadelphia battalions organized and trained throughout the summer, using an updated version of the 1756 Prussian Exercise for infantry and artillery, which Thomas Hanson, 2d Battalion Adjutant, published through subscription by Associator officers.<sup>127</sup>

Summer was usually a slow season for commerce. Farmers had few crops to harvest, and light winds slowed shipping. While Associators generally limited training to early mornings and late afternoons, some serving out Madeira to their tired warriors during the midday break, many officers



performed additional duties for the Committee of Safety.<sup>128</sup> Twice daily Loxley trained his artillery company at the State House. He supervised large numbers of artillerists and laborers readying ordnance, spent long hours building mobile blacksmith shops, making carriages, mounting gun tubes, and making them fit for duty. Loxley outfitted fortifications, batteries, and ships for the Pennsylvania Navy.<sup>129</sup> He taught gunpowder manufacture and the use of fireworks to the artificers. He surveyed pine logs and recommended their purchase by the Committee of Safety to be used in building the Delaware River *chevaux-de-frise*.<sup>130</sup> In 1776, the Committee of Safety accepted his offer to cast cannon.<sup>131</sup>

Loxley was not the only member of the artillery to advise the Committee of Safety. Major Mifflin was heavily involved with the Pennsylvania Navy and Captain Biddle was active in preparing river defenses. Captain Moulder purchased sail cloth, sails, cables, and rigging for the Pennsylvania Navy.<sup>132</sup> Moulder built lighter, more agile gun carriages for his cannon, and canvas carriage covers for the Artillery Battalion's cannon.<sup>133</sup> All Associator commands in the city, as well as the Pennsylvania Navy, adopted Moulder's modifications.<sup>134</sup>

Thomas Nevell built gun carriages for the cannon at Fort Mud, but the Committee of Safety minutes do not say whether his construction constituted an innovation.<sup>135</sup> Captain Jehu Eyre, commanding an additional company from Kensington, guarded the remaining artillery stored in many of Philadelphia's public buildings.<sup>136</sup> Eyre's shipyard built gunboats and frigates for the state and Continental navies.<sup>137</sup> Another officer, Francis Grice, also contracted to build a Continental Navy frigate.<sup>138</sup>

Autumn brought the harvest and stronger winds to the Delaware. With so many potential soldiers working longer hours, Pennsylvania organized its Continental quota, authorizing the 1st State Battalion (later redesignated as the 2nd Regiment) on 12 October. By 12 December, the 2nd through 4th State Battalions were organizing. Many of the officers and men were initially from Philadelphia or the surrounding counties, and many of them had received their initial training that summer, if not in prior conflicts.<sup>139</sup> Concurrently, many of the "gentleman" companies consolidated, as there was no longer as much need for such separate organizations.<sup>140</sup> The Quaker Blues consolidated into Cadwalader's 3rd Battalion

by October, 1775, and many former Greens and Blues applied for membership in the Philadelphia Light Horse.<sup>141</sup>

Thomas Procter organized a garrison for Mud Island on 16 October 1775. The Pennsylvania Committee of Safety authorized Procter to use the bedding and other accoutrements that Hay's artillery company left at the barracks.<sup>142</sup> Procter issued a uniform consisting of short blue coats, faced white, with round hats, very likely surplus Quaker Blues uniforms.<sup>143</sup>

On 1 August 1776, all Pennsylvania Associator battalions were reorganized to consist of six companies each. By that time, Pennsylvania had organized the bulk of the forces with which it would fight the Revolutionary War. The Military Association, led by veteran artillerists of the Philadelphia Artillery, had played a leading role in this mobilization. Because the artillery had detached so many of its elements, two companies from New Jersey, the 1st Company of Artillery of West Jersey under Captain Samuel Hugg, and the Eastern Company, New Jersey State Artillery, under Captain Daniel Neal, met the battalion with six additional guns and 120 men when it arrived at Amboy, New Jersey.<sup>144</sup> The now full-strength battalion spent the rest of the summer guard-

ing the river approaches to Manhattan at Amboy, Passaic, Elizabeth, Newark, and Woodbridge.<sup>145</sup> Though the artillery occasionally dueled with enemy forces, Howe's main army bypassed its position and landed at Staten Island to begin its assault on New York City.

Loxley's 1st Company marched home on 4 September, leaving part of the battalion in the Flying Camp.<sup>146</sup> The Philadelphia Artillery thereafter played an active and sometimes crucial role in the battles that followed the Amboy deployment. Elements of the battalion likely fought at Long Island, Brooklyn Heights, and White Plains and certainly fought at the disastrous defense of Fort Mifflin.<sup>147</sup>

On 23 November, the Pennsylvania Committee of Safety asked the Associators to volunteer for service. Following a precedent established in the Flying Camp the previous summer, the Associators ordered all available strength to a central rendezvous and then asked for volunteers, rather than draft individual soldiers or units.<sup>148</sup> The Association then organized the volunteers into deployable battalions or brigades, under officers of their own choosing.<sup>149</sup> The artillery followed suit; its nature likely necessitating that entire gun crews volunteer



**Figure 11. Grape shot.** Loxley's order to load grape illustrates the deadly serious nature of the confrontation.

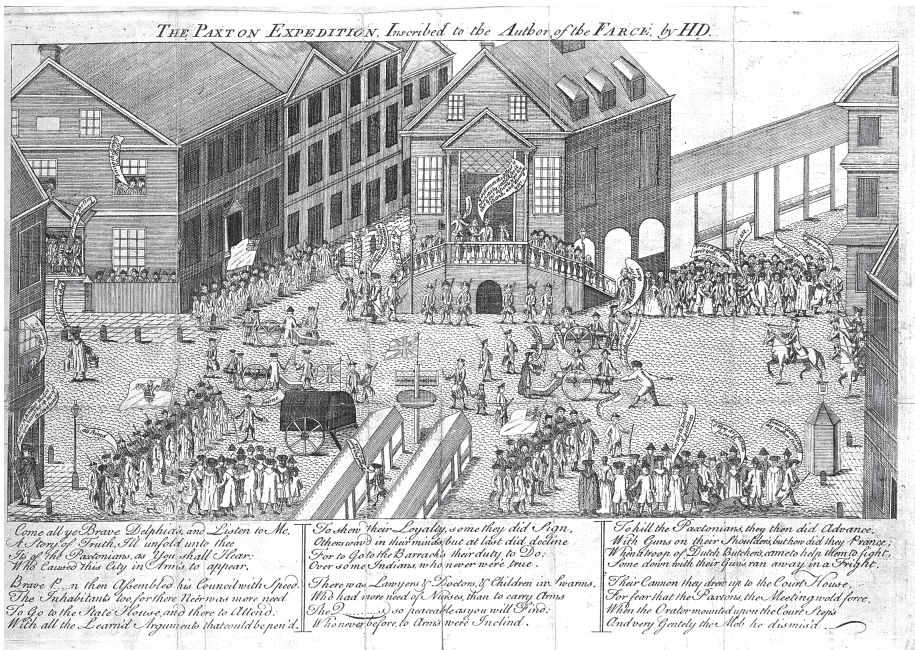


Figure 12. Paxton Boys cartoon. In this 1764 cartoon, an artillery officer orders his gunners to “light the match” and “load away.”

for service. In all, Colonel John Cadwalader mustered at least 1,000 Philadelphia Associators to reinforce Washington’s shattered army, artillery included. Major Thomas Procter dispatched Captain Forrest’s 2nd Company from the Pennsylvania State Artillery, and Captain Eyre’s company, a company commanded by Wingate Newman, marines and sailors from the Pennsylvania Navy under Captains Isaac Craig,

William Shippen, William Brown, Andrew Porter, and Thomas Read brought additional artillery.<sup>150</sup>

During the hazardous crossing of the Delaware River, the Philadelphia Artillery also contributed vital technical skills learned in their civilian occupations as shipwrights and mariners. Captain Jehu Eyre for example ordered seven artillerists to Trenton Ferry where they outfitted boats for the famous crossing.<sup>151</sup> Captain Moulder attached Second Lieutenant Anthony Cuthbert to Colonel Glover’s Marblehead Regiment.<sup>152</sup>

Because many of the American cartridges had become wet during the crossing, Washington relied on artillery fire to do the job that musketry might otherwise have done. On the morning of 26 December, Captain Thomas Forrest’s company led Major General Nathanael Greene’s

column during their assault on Colonel Johann Gottlieb Rall’s three Hessian regiments at Trenton.<sup>153</sup> Forrest’s guns made fast work of Rall’s three regiments.<sup>154</sup> South of town, Captains Moulder and Neal, and Captain-Lieutenant Winthrop Sargent’s company of Massachusetts artillery performed much the same service for the soldiers of Major General John Sullivan’s column.<sup>155</sup> On the eastern edge of town, Moulder’s 2nd Company helped to suppress remaining Hessian resistance.<sup>156</sup>

Philadelphia Artillerists repeated their direct-fire role during the Second Battle of Trenton. Following Colonel Joseph Reed’s reconnaissance, Washington ordered Brigadier General Matthias Alexis de Roche de Fermoy to delay Cornwallis’ advance on Trenton.<sup>157</sup> De Fermoy’s brigade



Figure 13. 18th (Royal Irish) Regiment of Foot Hanger. The 18th Regiment of Foot garrisoned Philadelphia from 1767 to 1774.

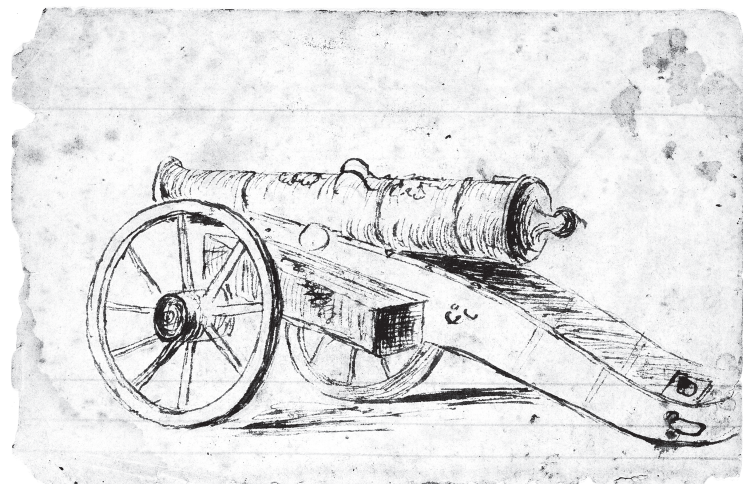


Figure 14. Cannon, by Charles Willson Peale. Associator cannon modified for field use.

included experienced skirmishers from Colonel Edward Hand's 1st Pennsylvania Regiment, Colonel Charles Scott's Virginia troops, and Captain Forrest's company.

Intending to overwhelm his enemy by means of a quick, decisive thrust, Cornwallis organized a flying column consisting of two battalions of light infantry, the 42nd Royal Highland Regiment, and a battalion of Hessian grenadiers, leaving Lieutenant Colonel Charles Mawhood in command at Princeton with the hat men of the 17th, 40th, and 55th Regiments of Foot and three troops of Harcourt's 16th (Queen's) Light Dragoons.<sup>158</sup>

In the middle of the morning of 2 January 1777, elements of General de Fermoy's brigade made contact with Cornwallis several miles outside of Trenton.<sup>159</sup> The Americans began an orderly retreat into Trenton, contesting the British at every opportunity in a series of sharp skirmishes and artillery duels between light infantrymen, highlanders, grenadiers, Pennsylvania riflemen, and Forrest's Philadelphia gunners.<sup>160</sup> Serving in a direct fire role, the artillery bought additional time for Washington to execute his own lightning thrust at Mawhood's unsuspecting Princeton garrison. By sunset, de Fermoy's brigade was safely behind pre-prepared positions outside Trenton.<sup>161</sup>

Early the next morning, Brigadier General Hugh Mercer started the advance guard toward Princeton.<sup>162</sup> His

brigade was supported by Captain Neal's Eastern Company. Washington followed with two brigades that included Captain Moulder's artillery. General Sullivan followed with the main body of the army and the rest of the artillery, including Eyre, the Pennsylvania sailors and marines, and Procter's company. A 500-man rear guard with two iron cannon stayed behind to deceive the British with built-up campfires and the sounds of digging, while Washington's main body slipped away to the east.<sup>163</sup> At Stony Brook, a creek a few miles west of Princeton, Washington began the assault. Washington directed Mercer to march straight into Princeton without leaving the road.<sup>164</sup>

No sooner had Mercer given the order to execute than Mawhood's scouts discovered the column and the redcoats formed their line. Both sides raced for a nearby orchard sitting on high ground, and at about forty yards distance, the two sides opened fire.<sup>165</sup>

Then the British fixed bayonets and charged. Though Neal's two guns caused heavy casualties, the effort did nothing to check the British charge. The Redcoats killed him and disabled his cannon.<sup>166</sup> The fighting degenerated into a melee as Mercer's brigade fell back in confusion and the American general fell mortally wounded.

Washington advanced across frozen ground to the sound of battle, but not before Mercer's line collapsed and



Figure 15. Battle of Princeton, by James Peale. The painting portrays the critical moment of the American counterattack, in the foreground, a gun of Mercer's 2d Company calmly fires at Mawhood's Redcoats.

began a panicky retreat into Cadwalader's brigade, threatening to turn the American retreat into a complete rout. At this point, Captain Thomas Rodney of the Delaware militia, who was a few yards away from the 2nd Company's guns, observed that Moulder's "two pieces of artillery stood their ground and were served with great skill and bravery."<sup>167</sup> Moulder's cannon poured fire into the British long enough for Washington, Greene, and Cadwalader to rally the troops and reengage the enemy.<sup>168</sup>

Mawhood retreated to a rail fence and extended his line.<sup>169</sup> Undaunted by the line of glittering bayonets, Moulder's Philadelphia artillerists stood their ground, firing grapeshot at the enemy. Mawhood's counterattack failed, his Redcoats suffering heavy casualties.

As the American army advanced into Princeton to mop up the remaining British there, the Philadelphia Light Horse joined Captain Moulder's Company at Stony Creek Bridge, where they fought and won a rearguard action against a troop of Queen's Light Dragoons.<sup>170</sup>

The fight at the Stony Creek Bridge was the last action fought by Associators. On 17 March 1777, the temporary "Expedient for rendering the Use of Arms more universal, and the Province more secure," passed into history as Pennsylvania passed its first true militia law.<sup>171</sup> Intending that the new enrolled structure be more equitable and efficient than the Association that it replaced, Pennsylvania authorized battalions consisting of six to eight companies organized by county, city, or ward when not in service, and eight classes when in the field. Each class represented a portion of a company, and company commanders took turns leading mobilized classes. In theory, the class system sought to ease the manpower strain on localities. In practice, militia members frequently served under officers with whom they did not train, and under terms of service that were not clearly defined. In contrast to the Associators that had performed so magnificently at Trenton and Princeton, the militia would prove something of a disappointment during the 1777 Philadelphia Campaign. Pennsylvania would instead turn to steady Continental line regiments, many of which had been organized out of the old Association, or were commanded by officers who owed much of their training to that old body. At war's end, many Continental veterans would reunite in the Pennsylvania's militia, where Association principles of volunteerism, proficiency, and preparedness would find new life.

#### BIBLIOGRAPHY

1. John Swift to John White, 12 April 1748, in Thomas Balch, ed., *Letters and Papers Relating Chiefly to the Provincial History of Pennsylvania, With Some Notices of the Writers* (Philadelphia, PA: Crissy and Markley, Printers,

1855), p. 15-16.

2. *Pennsylvania Gazette*, 23 July 1740. DeWitt Bailey, "British Military Small Arms in North America, 1755-1783," *American Society of Arms Collectors Bulletin*, 71 (1994): p. 4.

3. *Pennsylvania Gazette*, 5 November 1744.

4. William Trent to Governor George Thomas, Albany, 21 October 1746, in John Blair Sinn, ed., *Record of Pennsylvania Marriages*, 3 vols. (Harrisburg, PA: E. K. Meyers, 1890), 3: 450. See also Samuel J. Newland, *The Pennsylvania Militia: The Early Years, 1669-1792* (Annville, PA: Commonwealth of Pennsylvania, Department of Military and Veterans Affairs, 1997), 31. See also *Pennsylvania Archives: Colonial Records of Pennsylvania, The Minutes of the Provincial Council of Pennsylvania, From the Organization to the Termination of the Proprietary Government*, 16 vols. (Harrisburg, PA: Theo. Fenn and Co., 1851), 5: 38.

5. *Pennsylvania Gazette*, 24 July 1746.

6. Charles P. Keith, *Chronicles of Pennsylvania from the English Revolution to the Peace Aix-La-Chapelle, 1688-1748*, 2 Vols. (Philadelphia, PA: Private Printing, 1917), 2: 806. See also *Colonial Records*, 5: 38, and Newland, *Pennsylvania Militia*: 33.

7. Keith, *Chronicles*, 2: 806. See Also *Pennsylvania Gazette*, 7 August 1740.

8. John A. Houlding, *Fit For Service: The Training of the British Army, 1715-1795* (Oxford: Clarendon Press, 1981), 92.

9. Murtie June Clark, *Colonial Soldiers of the South, 1732-1774* (Baltimore, MD: Genealogical Publishing Company, Incorporated, 1983), pp. 125-258.

10. *Pennsylvania Gazette*, 8 September 1740.

11. Houlding, *Fit For Service*, 183. Benjamin Franklin published *Blakeney's Exercise* in 1746, 1747, 1755.

12. Benjamin Loxley, "Benjamin Loxley's Account of his Ancestors, of his Parents and of Himself and Family, Dated June 20, 1789." Manuscript Collection, Historical Society of Pennsylvania, Philadelphia, PA, 2. Loxley implied a connection to the legendary Robin Hood.

13. *Ibid.*, 10.

14. *Ibid.*, 3, 10.

15. Robert S. Rush, "Der Gute Kamerad: The life of a Prussian Soldier in the Army of Frederick William I," 6-7, 30. Unpublished Manuscript, Author's Collection.

16. Robert K. Wright, Jr., "The Massachusetts Militia: A Bibliographical Study." Unpublished Manuscript. United States Army Center of Military History, Washington, DC.

17. James Logan to Benjamin Franklin, Philadelphia, 7 December 1747, in Benjamin Franklin, *The Papers of Benjamin Franklin*, Leonard W. Labaree, et al., eds., 28 vols. (New Haven, CT: Yale University Press, 1960), 3: 191, 3:

219–220.

18. *Ibid.* See also Benjamin Franklin, *Benjamin Franklin's Autobiography*, J. A. Leo Le May and P. M. Zall, eds. (New York, NY: W. W. Norton and Company, 1986), 84, and Carl Van Doren, *Benjamin Franklin* (Garden City, NY: Garden City Publishing Company, Incorporated, 1941), 200.

19. Franklin, *Autobiography*, 92.

20. Carl E. Swanson, *Predators and Prizes: American Privateering and Imperial Warfare, 1739–1748* (Columbia, SC: University of South Carolina Press, 1991), 2. In addition to the Pennsylvania levies, 4,646 Philadelphians sailed from the Delaware River in privateers in the course of the war.

21. Franklin, *Papers*, 3: 195–96.

22. Richard Peters to Thomas Penn, 29 November 1747, in Franklin, *Papers*, 3: 216.

23. Franklin, *Autobiography*, 87–88.

24. “Articles of Association,” in Franklin, *Papers*, 3: 205–12.

25. *Ibid.*

26. *Ibid.*

27. *Ibid.*

28. *Ibid.*, 3: 206–7.

29. *Ibid.*, 3: 207.

30. *Ibid.*

31. *Colonial Records*, 5: 158.

32. *Colonial Records*, 5: 174–5. Craig Horle, et al., eds., *Lawmaking and Legislators in Pennsylvania: A Biographical Dictionary*, 2 vols. (Philadelphia, PA: University of Pennsylvania Press, 1997), 2: 907.

33. Sally E. Griffith, “Order, Discipline, and a Few Cannon: Benjamin Franklin and the Rhetoric and Practice of Boosterism,” *Pennsylvania Magazine of History and Biography* (April 1992): 152.

34. George D. Moller, *American Military Shoulder Arms: Colonial and Revolutionary Arms* (Boulder, CO: University of Colorado Press, 1991), 117, 124, 133, 233–4. See also John Folwell, “Mr. Marchoo Dr. to John Folwell, £1.15.” and Abraham Markoe, “To James Claypoole, Dr. £8.00,” First Troop, Philadelphia City Cavalry Museum, Philadelphia, *Pennsylvania Archives*, 1st Ser., 3:62., Rediker, *Between the Devil and the Deep Blue Sea*, 305, and Franklin, *Autobiography*, 92. The average merchant seaman’s wage was £1.66 per month. See also Anthony D. Darling, *Redcoat and Brown Bess* (Alexandria Bay, NY: Museum Restoration Service, 1971), 9. A British Army soldier earned 8 *p.* per day.

35. Wright, “Massachusetts Militia.”

36. Franklin, *Papers*, 3: 207–8.

37. Albert W. Haarmann and Eric I Manders, “Pennsylvania Associators 1747–1748,” *Military Collector and Historian*, 33 (Fall 1981): 100.

38. Rolls of the Philadelphia Light Horse. Museum of

the First Troop Philadelphia City Cavalry, Philadelphia. See also *Pennsylvania Archives*, First Ser., 3: 20, 4: 120, 124, 656–8.

39. Franklin, *Autobiography*, 92. John Swift to John White, 29 November 1747, in Balch, *Letters and Papers*, 10–11.

40. *Ibid.*

41. James Logan to Benjamin Franklin, Philadelphia, 7 December 1747, in Franklin, *Papers*, 3: 219–20.

42. *Pennsylvania Gazette*, 3 March 1729. See also John Fanning Watson, *Annals of Philadelphia and Pennsylvania, In the Olden Time; Being a Collection of Memoirs, Anecdotes, and Incidents of the City and its Inhabitants, and of the Earliest Settlements of the Inland Part of Pennsylvania, From the Days of the Founders*, 3 vols. (Philadelphia, PA: Elijah Thomas, 1860), 1: 325, 344–45.

43. *Pennsylvania Gazette*, 3 March 1729, 4 March 1731, 4 August 1732, 3 July 1740.

44. *Colonial Records*, 5: 172–73, 187. See also Robert L. D. Davidson, *War Comes to Quaker Pennsylvania, 1682–1756* (New York, NY: Columbia University Press, 1957), 54.

45. *Colonial Records*, 5: 228.

46. *Pennsylvania Gazette*, 28 April 1748. See also Griffith, “Order,” 151.

47. *Pennsylvania Gazette*, 28 April 1748, 12 March 1767, 16 May 1771.

48. *Colonial Records*, 5:249. See also John Swift to John White, 12 April 1748, in Balch, *Letters and Papers*, 15–16.

49. *Pennsylvania Gazette*, 18 July 1745.

50. John Swift to John White, 12 April 1748, in Balch, *Letters and Papers*, 15–16. See also Gunther E. Rothenberg, *The Art of Warfare in the Age of Napoleon* (Bloomington, IN: Indiana University Press, 1978), 76.

51. James Logan to Benjamin Franklin, Philadelphia, 7 December 1747, in Franklin, *Papers*, 3: 219–20.

52. *Colonial Records*, 5: 249, 251.

53. *Ibid.*, 5: 250.

54. K. Alonzo Brock, ed., “The Journal of William Black, 1744,” *Pennsylvania Magazine of History and Biography* 1 (1877): 247. See also Howard I. Chapelle, *The History of American Sailing Ships* (New York, NY: Bonanza Books, 1935), 297–98. *Le Trembleur* cost £800.

55. *Pennsylvania Gazette*, 28 May 1741, 17 May 1744. See also *Colonial Records*, 5: 267.

56. *Pennsylvania Gazette*, 21 November 1751, 21 August 1755. See also Loxley, “Benjamin Loxley’s Account,” 3.

57. “Restoration of the Schuylkill Gun to the “State in Schuylkill,” April 23d, 1884,” *Pennsylvania Magazine of*

*History and Biography* 8 (1884): 199.

58. *Pennsylvania Gazette*, 15 October 1754.

59. Loxley, "Benjamin Loxley's Account," 6.

60. Loxley, "Benjamin Loxley's Account," 6. See also F. Edward Wright, *Abstracts of Philadelphia County Wills*, 4 vols. (Westminster, MD: Family Line Publications, 1998), 3: 213.

61. *Pennsylvania Gazette*, 21 August 1755.

62. *Pennsylvania Archives*, First Ser., 3: 25.

63. Loxley, "Benjamin Loxley's Account," 6. See also Alfred Procter James and Charles Morse Stotz, *Drums in the Forest* (Pittsburgh, PA: Historical Society of Western Pennsylvania, 1958), 87.

64. Loxley, "Benjamin Loxley's Account," 7.

65. *Ibid.*

66. "Accident Report, State House Yard (1774)." Independence National Historical Park, Philadelphia, PA.

67. Loxley, "Benjamin Loxley's Account," 7. See also *Pennsylvania Gazette*, 25 March 1756.

68. John Muller, *A Treatise of Artillery* (London: John Millan, 1780), 179.

69. *Ibid.*

70. *Pennsylvania Gazette*, 25 March 1756.

71. *Pennsylvania Gazette*, 26 August 1756.

72. *Pennsylvania Archives*, First Ser., 3: 120–36.

73. *Ibid.*, 3: 136.

74. *Pennsylvania Archives*, First Ser., 3: 25.

75. *Ibid.*

76. *Pennsylvania Gazette*, 17 March 1756.

77. *Ibid.*, 20 May 1756.

78. *Ibid.*

79. Houlding, *Fit For Service*, 183.

80. Loxley, "Benjamin Loxley's Account," 1. See also Loxley, "The Journal of Benjamin Loxley, 1771–1785," 67, 80.. Manuscript Collection, Historical Society of Pennsylvania, Philadelphia.

81. *Pennsylvania Gazette*, 8 April 1756. See also Franklin, *Autobiography*, 128.

82. *Pennsylvania Archives*, 1st Ser., 3:63. See also Joseph Moulder, "To John Nixon, Order to Pay Capt. Jos. Moulder 25 pounds for his Purchase of Tin for the Use of the Province, July 10, 1776." Manuscript Collection, Historical Society of Pennsylvania. See also Henry Ward to Catherine Johnson, 28 June 1758, in Henry Ward, "Papers." Manuscript Collection, Historical Society of Pennsylvania, Philadelphia. See also Hogg, *Artillery*, 142–43.

83. Isaac Norris to Charles Norris, Philadelphia, 29 April 1755, in William S. Hanna, *Benjamin Franklin and Pennsylvania Politics* (Stanford, CA: Stanford University Press, 1964), 104. The grenadier uniforms particularly offended the sensibilities of certain members of the Quaker establishment.

84. *Pennsylvania Gazette*, 4 March 1756.

85. *Ibid.*, 26 August 1756.

86. *Pennsylvania Archives*, First Ser., 3: 126.

87. *Ibid.*, 3: 126–7.

88. *Ibid.*, 3: 126.

89. Benjamin Loxley, "A Return of Artillery, Small Arms & Sundry Stores belonging to this Province Delivered by me, to the Provincial Commissioners on Account of George North, Capt. of our Pennsylvania Artillery Company, Philadelphia, May the 4th 1758." Nead Papers, Manuscript Collection, Historical Society of Pennsylvania. See also Watson, *Annals*, 1: 401–2.

90. *Pennsylvania Archives*, First Ser., 3: 26.

91. *Ibid.*

92. *Colonial Records*, 8: 39. See also *Pennsylvania Archives*, First Ser., 3: 26.

93. *Pennsylvania Archives*, First Ser., 3: 27, Second Ser., 2: 631, 635, 648. See also Mcree, *Abstracts*, 2: 91, Townsend Ward, "South Second Street and its Associations," *Pennsylvania Magazine of History & Biography* 5 (1881): 48, "The Mount Regale Fishing Company of Philadelphia," *Pennsylvania Magazine of History & Biography* 27 (1903): 88–89. *Pennsylvania Gazette*, 6 January 1737. *A History of the Schuylkill Fishing Company of the State in Schuylkill, 1732–1788* (Philadelphia, PA: Private Printing, 1889), 54–5, 316, 341, 362–3. F. Edward Wright, *Abstracts of Philadelphia County Wills*, 4 vols. (Westminster, MD: Family Line Publications, 1998), 1: 22, 25, 91, 146, 148, 362–3. *An Historical Catalogue of the St. Andrew's Society of Philadelphia, With Biographical Sketches of Deceased Members, 1749–1907* (Philadelphia, PA: Private Printing, 1907), 209, 332.

94. Loxley, "Benjamin Loxley's Account," 14, and Loxley, "Journal of Benjamin Loxley," 22, and *Pennsylvania Gazette*, 22 May, 12 June 1766.

95. John Forbes to James Abercromby, 20 April 1758, in John Forbes, *Writings of General John Forbes Relating to Service in North America*, Alfred Procter James, ed. (Menasha, WI: Collegiate Press, 1938), 65.

96. John Forbes to William Denny, Philadelphia, 20 April 1758, in Forbes, *Writings*, 66–7.

97. *Pennsylvania Gazette*, 8 March 1748.

98. Loxley, "Benjamin Loxley's Account," 7.

99. *Ibid.*

100. *Ibid.*

101. John Forbes to James Abercromby, 22 April 1758, in Forbes, *Writings*, 69.

102. Loxley, "Return of Arms."

103. Alexander Graydon. *Memoirs of a Life Chiefly Passed in Pennsylvania Within the Last Sixty Years* (Edinburgh: Printed For William Blackwood and T. Cadell, Strand, London, 1822), 40.

104. Graydon, *Memoirs*, 40. See also Hindle, "March of the Paxton Boys," 476.
105. Haarmann and Manders, "Pennsylvania Associators 1747-1748," 102.
106. *Ibid.*
107. *Ibid.*
108. *Ibid.*, 475.
109. Alison Olson, "The Pamphlet War Over the Paxton Boys," *Pennsylvania Magazine of History and Biography* 123 (January/April 1999): 31-53.
110. See also Graydon, *Memoirs*, 40.
111. Loxley, "Benjamin Loxley's Account," 14.
112. *Ibid.*
113. *Pennsylvania Gazette*, 12 June 1766.
114. *Ibid.*, 31 March 1768.
115. Loxley, "Journal of Benjamin Loxley," 51, 97.
116. *Ibid.*
117. *Ibid.*, 103.
118. Pauline Maier, *From Resistance to Revolution: Colonial Radicals and the Development of American Opposition to Britain, 1765-1776* (New York, NY: W. W. Norton and Company, 1991), 267.
119. "Accident Report, State House Yard," Independence National Historical Park Collection, Philadelphia.
120. Loxley, "Benjamin Loxley's Account," 8.
121. *Colonial Records*, 10: 315-20. See also William Henry Rawle, "Col. Lambert Cadwalader: A Sketch," *Pennsylvania Magazine of History and Biography* Volume 10 (1886), 1-14.
122. *Colonial Records*, 10: 315. See also *Virginia Gazette*, 14 June 1776.
123. *Pennsylvania Archives*, Fifth Ser., 7: 4-10. See also Whitfield J. Bell, Jr., ed. "Addenda to Watson's Annals of Philadelphia: Notes by Jacob Mordecai, 1836," *Pennsylvania Magazine of History and Biography* 98 (April 1974): 146, and *Diary of Christopher Marshall*, 22.
124. Loxley, "Benjamin Loxley's Account," 6, 9. See also "At a Meeting of the First Company of Artillery of the City and Liberties of Philadelphia this 31st of July 1775," in "Peters Papers" 8:64. Manuscript Collection, Historical Society of Pennsylvania, Philadelphia. See also *Pennsylvania Archives*, Sixth Ser., 1: 183.
125. *Pennsylvania Archives*, 2 Ser., 13: 559-60.
126. *Colonial Records*, 10: 315-20.
127. Thomas Hanson, *The Prussian Evolutions in Actual Engagements; Both in Platoons, Sub, and Grand-Divisions; Explaining All the different Evolutions and Manœuvres, in FIRING, STANDING, ADVANCING, and RETREATING, which were exhibited before his present MAJESTY, May 8, 1769; and before JOHN DUKE of ARGYLE, on the LINKS of LEITH, near EDENBURGH, in 1771 With Some ADDITIONS, since that TIME, explained with Thirty Folio COPPER-PLATES TO WHICH IS ADDED, The PRUSSIAN MANUAL EXERCISE: ALSO The Theory and some PRACTICES of GUNNERY* (Philadelphia, PA: J. Douglas McDougall, 1775). See also *Pennsylvania Gazette*, 2 August 1775.
128. Silas Deane to Elizabeth Deane, Philadelphia, 3 June 1775. In *Collections*, 1: 48, 53. See also John Adams to Isacc Smith, Sr., Philadelphia, 7 June 1775, in Lyman H. Butterfield, Wendell D. Garrett, and Marjorie E. Sprague, eds. *Adams Family Correspondence*. 5 vols (Cambridge, MA: Belknap Press of Harvard University Press, 1963), 1: 212. See also "Benjamin Loxley's Account," 8-9, and Graydon, *Memoirs*, 118-121.
129. Loxley, "Benjamin Loxley's Account," 8, 9.
130. *Colonial Records*, 10: 285.
131. *Ibid.*, 10: 500, 626.
132. *Ibid.*, 10: 409.
133. Loxley, "Journal of Benjamin Loxley," 180.
134. *Colonial Records*, 10: 327.
135. Dorwart, *Fort Mifflin*, 21.
136. Peter D. Keyser, "Memorials of Col. Jehu Eyre," *Pennsylvania Magazine of History and Biography* 3 (1879): 413-4.
137. *Ibid.*, 10: 285, 296.
138. William Henry Egle, ed., *Pennsylvania Archives: Journals and Diaries of the War of the Revolution With Lists of Officers and Soldiers, 1775-1783* (Harrisburg, PA: E. K. Meyers, 1893), 772. See also Howard I. Chapelle, *The History of the American Sailing Navy: The Ships and their Development* (New York, NY: Bonanza Books, 1949), 60. The other two shipyards were Wharton and Humphreys and Warwick Coates.
139. Graydon, *Memoirs*, 126. William Allen was Lieutenant Colonel of St. Clair's Battalion. See also Lambert Cadwalader, "Letter of Lambert Cadwalader to Timothy Pickering on the Capture of Fort Washington," *Pennsylvania Magazine of History and Biography*, 25 (1901), William Henry Rawle, "Col. Lambert Cadwalader: A Sketch," *Pennsylvania Magazine of History and Biography*, 10 (1886).
140. John Lardner to Captain R. C. Smith, 31 July 1824. In Stryker, *Trenton and Princeton*, 443.
141. "Donnaldson Narrative," Museum of the First Troop Philadelphia City Cavalry, Philadelphia. See also *Pennsylvania Archives*, Sixth Ser., 1: 8, 9, 183, and John Adams to Isacc Smith, Sr., Philadelphia, 7 June 1775, in Butterfield, Garrett, and Sprague, *Adams Family Correspondence*, 1: 213.
142. William Henry Egle, ed., *Pennsylvania Archives: Journals and Diaries of the War of the Revolution With Lists of Officers and Soldiers, 1775-1783* (Harrisburg, PA: E. K. Meyers, 1893), 943.
143. Samuel Nicholas organized the Continental

Marines about this time. Its uniform bore a striking resemblance to the uniform of the Philadelphia Greens uniform.

144. Benjamin Loxley, "A Journal of the Campaign to Amboy and Other Parts of the Jerseys, 1776," 1. Manuscript Collection, Historical Society of Pennsylvania. Force, *American Archives, Fifth Series*, 1: 474-5, 600-1, 788. See also Loxley, "Journal of the Campaign to Amboy," 13, 42.

145. Force, *American Archives, Fifth Series*, 1: 474-5.

146. Loxley, "Journal of Benjamin Loxley," 207.

147. William Henry Egle, ed., *Pennsylvania in the War of the Revolution, Associated Battalions and Militia, 1775-1783*, 2 vols. (Harrisburg, PA: E. K. Meyers, 1890, 1892), 2: 773-6. See also Manders, "Notes," 12 and Newland, *Defending the Commonwealth*, 126.

148. *Pennsylvania Archives*, 5th Ser., 5:16-25. See also "Pennsylvania Committee of Safety Broadside, 24 November 1776." Manuscript Collection, Library of Congress, Washington, DC.

149. Revolutionary War Pension Files, M-804, Roll 858: 528. National Archives and Records Administration, Washington, DC. See also *Pennsylvania Archives*, Sixth Ser., 2: 618-9, George R. Prowell, *History of York County, Pennsylvania*, 2 vols. (Chicago, IL: J. H. Beers Company, 1907), 1:184, and Howard H. Peckham, ed., *Memoirs of the Life of John Adlum in the Revolutionary War* (Chicago, IL: Caxton Club, 1968), 4.

150. William A. Porter, "A Sketch of the Life of General Andrew Porter," *Pennsylvania Magazine of History and Biography* 4 (1880): 263-4. See also Isaac Craig, "Muster-Rolls of Marines and Artillery Commanded by Capt. Isaac Craig, of Pennsylvania, in 1775 and 1778," *Pennsylvania Magazine of History and Biography* 8 (1884): 350, and Rogers, *History*, 180, and *Colonial Records*, 10: 605.

151. Keyser, "Memorials," 416.

152. William S. Stryker, *The Battles of Trenton and Princeton* (Boston, MA: Houghton, Mifflin and Company, 1898), 136.

153. *Ibid.*, 1: 300.

154. *Ibid.*

155. George Washington, General Orders, Bucks County, Pennsylvania, 25 December 1776, in Chase, *Papers*, 7: 434. See also Ketchum, *Winter Soldiers*, 304, 311-2. See also Ward, *War of the Revolution*, 1: 295, 301.

156. Richard M. Ketchum, *The Winter Soldiers* (Garden City, NY: Doubleday and Company, Inc., 1973), 312.

157. Reed, "General Joseph Reed's Narrative," 399-400.

158. Thomas Sullivan, "The Battle of Princeton," *Pennsylvania Magazine of History and Biography* 32 (1908): 55.

159. Ward, *War of the Revolution*, 1: 308.

160. Reed, "General Joseph Reed's Narrative," 402.

161. *Ibid.*, See also Young, "Journal of Sergeant William

Young," 264.

162. Rodney, *Diary*, 32.

163. Young, "Journal of Sergeant William Young," 263-4. See also "An Account of the Battle of Princeton," *Pennsylvania Magazine of History and Biography* 8 (1884): 310.

164. Rodney, *Diary*, 33.

165. Anonymous, "Account of the Battle of Princeton," 310.

166. Sullivan, "Battle of Princeton," 55.

167. Rodney, *Diary*, 36.

168. *Ibid.*

169. *Ibid.*, 34.

170. Donaldson, "Donaldson Narrative," 13-14. See also Rodney, *Diary*, 37.

171. *Pennsylvania Gazette*, 4 March 1756.

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10. Philadelphia Map Horn. Colonel J. Craig Nannos Collection. Photograph by John Bansemer.

11. Grape Shot. Colonel J. Craig Nannos Collection. Photograph by John Bansemer.

12. *Paxton Expedition. Inscribed to the Author of the Farce by HD.* The Library Company of Philadelphia.

13. 18<sup>th</sup> (Royal Irish) Regiment of Foot Hanger. Colonel J. Craig Nannos Collection. Photograph by John Bansemer.

14. Cannon, by Charles Willson Peale. Courtesy of the American Philosophical Society.

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