

# A Survey of Picks & Brushes at the 127th Meeting of the American Society of Arms Collectors, King of Prussia, Pennsylvania

by Fred Gaede and Lee Bull

We would like to thank the 19 members who responded to our call for examples and brought a total of 48 pick & brush (p+b) sets to the meeting. Our display was titled "This necessary little article: Picks & Brushes in the U.S. Army; and an informal discussion of the examples was held in the Gun Room on Saturday afternoon. This survey builds on an article published in *Military Collector & Historian*<sup>1</sup>, co-authored by Fred Gaede with the late James S. Hutchins. For reference, from his extensive library Lee had on hand original volumes of the 1834 and 1839 *Ordnance Regulations*, as well as his copy of the 1841 *Ordnance Manual*. We offer some observations based on the sets examined.

We actually began not with a p+b example, but with a sketch (Fig. 1) by German gunsmith Martin Merz of a pick attached to the stock of match lock long gun, ca. 1475, shown in Volume 1 of former ASAC Honorary Member Dr. Arne Hoff's two volume treatise, *Feuerwaffen, Klinkhardt & Biermann*<sup>2</sup>, illustration no. 11, page 13. Everyone was surprised to learn both about the early date for an appearance of the pick, and the fact that it was physically attached to the arm.

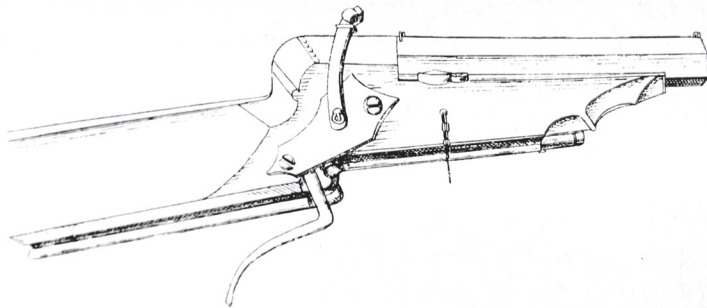


Fig. 1 - 15th Century sketch of a pick attached to a match lock, from *Feuerwaffen, Klinkhardt & Biermann*, courtesy Lee Bull.

There were four examples in the display of early p+b sets, a style which dates to the Revolutionary War, although two are now attached to the straps of what may be early 19th century cartridge boxes. While such early P + B sets are seen regularly at shows and in collections, the authors are not aware of any documentation of a pattern for picks and brushes having been adopted during the Revolutionary War. Examples like that shown in Fig. 2, with a tri-lobed connecting piece and very short, thin, wire-wrapped links, have been dug at Revolutionary War sites. This style remained common through the end of the 18th century. In 1779-81 there were requisitions for "brushes and wires" to accompany "the new constructed cartridge box" approved by the Continental Congress. Also referred to as "New Model Cartridge Boxes," they carried 29 paper-wrapped cartridges and were intended to be the standard infantry box for Continental soldiers.<sup>3</sup> The New Model "Hawes" box, not pictured but in the collection of the National Museum of the United States Army, is an example with a similar set attached to the shoulder belt.<sup>4</sup> Other extant post-war boxes have p+b sets attached to their shoulder belts, a practice which appears to have been standard in both Regular and militia units until early in the 19th century. Such an example, again with short links, was brought by Ben Michel and is shown in Fig. 3.

While references to p+b sets for pistols are rare, the earliest ar-



Fig. 2 - Short links typical of the 18th Century, courtesy Lewis Leigh and Mike Carroll.

chival mention that was brought to our attention, courtesy of Lew Southard, is dated June 10, 1780, in which Commissary of Military Stores Samuel Hodgdon instructed Major Jonathan Gostelowe (likely stationed in or near Philadelphia) to have "250 brushes and wires" "ready for transportation at a moment's notice," to accompany "250 pairs of pistols with cart. Boxes."<sup>5</sup>



The earliest evidence of which the authors are aware that a standard pattern had been adopted for the U.S. Army comes during the War of 1812. On September 8, 1813 Commissary General of Purchases Callender Irvine (Philadelphia) wrote Deputy Commissary of Purchases Samuel Russell (New York) that "Three thousand brushes & pickers shall be forwarded to you."<sup>6</sup> The origin of so many sets is unknown, but it was likely that they were made under an as yet unlocated contract and followed a single design established in Philadelphia. A pay-

Fig. 3 - Another p+b with short links attached to a cartridge box shoulder belt, courtesy Ben Michel.

ment receipt signed by John Young of Baltimore and dated May 12, 1813 is known, for example, acknowledging payment to him of \$25 for 200 “priming Wires and Brushes,” which cost 12.5¢ each.<sup>7</sup> In a folder of proposals in response to December 1814 advertisements for military goods, including “Brushes and Wires,” one Isaac Foster offered “Priming Wires + Brushes, the Brushes to be Capt [capped] with Leather and Bound with Brass wire. 2000 p[e]r Month at 49 Dollars pr thousand.”<sup>8</sup> The reference to leather caps for the brushes was the only one noted in archival sources. At 4.9¢ each these were very inexpensive items, and less than what would be the costs quoted by Government arsenals not many years later. These references confirm at least some of this article were procured by contract, although it is not known if they all followed the same pattern. With deputy commissaries generally guided by patterns provided by Irvine, and his desire for the use of approved patterns noted often in his correspondence, the commissary general of purchases was keen on establishing patterns both to guide inspections and to ensure items received were serviceable to the soldiers.

Indeed, on December 2, 1814 Irvine confirmed that a pattern for p+bs existed when he advised Military Store Keeper John Taylor (Philadelphia) that Taylor would be receiving a number of “articles for Patterns. . . Mr. [Marine T.] Wickham will select the [patterns for] Cannon Chains and Brush & Wire.”<sup>9</sup> Whether this suggests a continuation of a previous pattern, or selection of a new one from among prototypes, is unknown. Thus we cannot offer a P1814 p+b as part of a typology for the item. Further, whether they differed from Foster’s proposal to cap his brushes with leather and bind the links with brass wire is unknown. However, remnants of a possible War of 1812 U.S. Army pattern were recovered by the late Duncan Campbell from a wartime trash dump at Sacket’s Harbor, New York. Campbell’s notes indicated that it “came out of the huge dump between Fort Pike and the waters of Black River Bay”<sup>10</sup> in 1956. Two of the recovered brass links, wire bound and approximately 2 5/8 inches long, are shown in Fig. 4, along with a locket and two tips for P1808 bayonet scabbards. In the opinion of the authors, the length of the links would prove significant and is further discussed below.

Despite the clues discussed above, the first manuscript description from within the department known to the authors of the p+b used by the U.S. Army is dated 1823. It suggests the Ordnance



Fig. 4 Two links approximately 2 5/8 inches long from a War of 1812 trash pit at Sacket's Harbor, recovered in 1956 by the late Duncan Campbell, courtesy Fred Gaede.

Department was making its own p+b sets—of iron! In writing to Chief of Ordnance Colonel George Bomford about rifle accoutrements, Captain George Talcott noted: “A Brush & wire is sometimes added and we only have some sent here by Lt. Thomas from [Frankford Arsenal] Phila. which are unfit for use being made of iron wire with tin sockets [for the brush] and in most rough style that has been seen.”<sup>11</sup> The only iron p+b set (Fig. 5) was brought by Jim Shaffer, and it was fascinating to examine. The 3 to 3 1/8 inch links are a bit longer than usually encountered. The overall length is about 14 inches, without the missing brush. Note it does not have a link above a connecting piece for lower, separate links going to the pick and brush (the *branches* noted in the 1841 *Ordnance Manual*).<sup>12</sup> The links do have fine iron wire wrapped around them, in the style usually seen for the Regular Army. However, the “socket” for the brush is unusual. It is not a finely finished piece, and may have been typical of those causing complaints from officers in the field. With the curt descriptions available, whether this example was actually made at Frankford, or was made locally for an unknown militia unit, cannot be determined.

In 1825 Captain Rufus L. Baker, a rising star in the Ordnance Department stationed at Fortress Monroe, Virginia, echoed Talcott, complaining “The priming wires and brushes which have heretofore been sent to me for issue are such an inferior quality, and their appearance is so bad, that the Companies have all been at the expense of having brass wire made, in preference to wearing them.”<sup>13</sup> Baker soon thereafter (September 2, 1826) again noted: “The priming wires and brushes that have been heretofore sent here, are so small and weak, that they do not stand service—It would be much better to make them of brass wire, and the chain part at least ten inches long – The Officers commanding companies have generally made them at their own expense, in preference to issuing those received from the Ordnance Department.”<sup>14</sup> This correspondence suggested the captain had also received sets made of iron, since it was noted the locally made replacements were of brass wire.

Frankford Arsenal would be the source of most of the Army’s p+b sets until they ceased to be an item of issue, at the end of

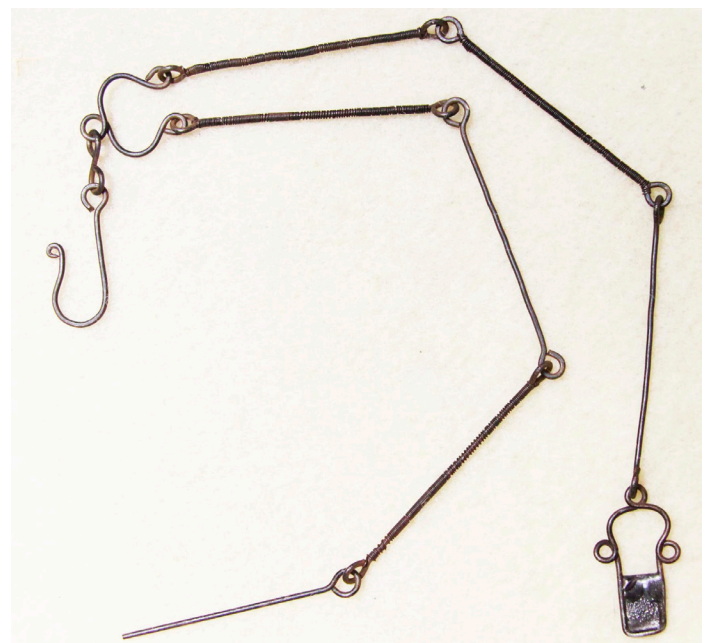


Fig. 5 - An intriguing iron set, the only one entirely in that metal. It is not tin plated so not of the style authorized between 1827 and 1832. Courtesy Jim Shaffer.

the Mexican-American War. How, why, or when, the pattern for this item would have changed from brass to iron after the War of 1812 remains unknown. Even if it was fiscally motivated, the total savings to the department would have been minuscule. However, we know that before November of 1826 samples for p+bs in brass were being considered, but not likely with longer links as suggested by Captain Baker. On November 30th Lieutenant Thomas J. Baird, now in command at Frankford, suggested new patterns of “brass wire” had only been “recently furnished.”<sup>15</sup> They were likely prototypes that had been sent to Chief of Ordnance George Bomford for consideration. Possibly Baird had suggested the design for the newest prototypes, or, more likely, a sample from overseas may have been the source for the latest design. (French models of small arms, cannon and uniforms were in vogue at the time for our military.) He was instructed by Bomford to “ascertain the price at which brushes and pickers, like this new pattern, can be furnished.”<sup>16</sup> Baird responded on January 31, 1827 with “a white and yellow Brush & Wire for inspection. I have made 100 of the latter in order to ascertain their cost, which including mens[‘] pay, clothing, subsistence &c will be about 17 cents. The white will not cost near as much, as they are made of Iron Wire, which we have tinned ourselves. Should you approve them, and a quantity be wanted, I propose casting the cylinder containing the bristles, which will not only render them cheaper but also neater. There is in my opinion no part of the equipment of our Soldiers that has been so little attended to as this necessary little article. In fact they have generally been so rough and so illy calculated to set off the other parts of their dress, that I am persuaded the men have often made way with them, on that account. . . . Annexed are the prices of the present pattern, those I formerly sent you, and the very common ones purchased some time since in Philadelphia.

Present pattern say no doubt can be made cheaper	17 cts
Pattern recently furnished, brass wire	6½ cts
Iron Wire purchased in Philadelphia, <u>very</u> common	7 cts” <sup>17</sup>

On February 10, 1827 Colonel Bomford approved the samples, noting to Baird “You will proceed to make 1,000 Setts of each kind, as they are much approved. Your suggestion of casting the Sockets is also approved; and you will cause them to be cast accordingly; and for both kinds. Those for the iron wire, should be tinned, so as to have the same color as the iron wire. The long links are considered better than the short ones . . . [and with] a stiffer kind of brass wire would be better.”<sup>18</sup> Thus we can confidently say there was a P1827 Pick & Brush Set.

Baker requisitioned “600 priming Wires & brushes (new pattern)” the next month,<sup>19</sup> confirming a pattern change had been made. The authors believe that “short links” referred to links of about 2 5/8 inches long (Fig. 6, right), while the longer links which likely replaced them appear to be those which are 2 7/8 inches long (Fig. 6, left). The overall lengths of the linked portions, including hook at the top, are 9 3/8 inches and 14 1/4 inches, respectively, largely because the example at right only has a single link at the top. The overall lengths, including the brushes and pickers, are 11 5/8 inches and 17 ½ inches, respectively. There will be more on the two links at the top of p+b sets later in this article.

A brief experiment was made between 1827 and 1832, during which years Army accoutrements also included a “white metal” version of the p+b to conform to the white trim on infantry uniforms, while brass sets continued to be made for the other branches



Fig. 6 - Although similar, the links are shorter (2 5/8 in.) on the example at right than the one at left (2 7/8 in.) It also has only one link above where the set are joined by a curled wire connector. The one at right may represent the pattern adopted in 1827. Courtesy the late Phil Leveque and Fred Gaede.

of service which were prescribed them. As mentioned above, Lieutenant Baird noted the manufacture of white metal samples in January 1827. The bismuth-based white metal, used initially for bayonet belt plates, proved too soft for field use and its employment was ended in 1832, when all accoutrements again utilized brass for their metallic components. At least 1,000 white p +b sets were produced at Frankford Arsenal, with 650 being sent to Lieutenant J.A. Adams in Baton Rouge.<sup>20</sup> An 1829-dated receipt (Fig. 7) shows a contract receipt at Watervliet Arsenal for “Plated Priming Wires & Brushes.”<sup>21</sup> The four gross (576) sets were bought at the rate of 6.25¢ each. (Note also the purchase of 10 pounds of bismuth.) Following Bomford’s instructions, the plating for the p+b sets delivered by Suydam & Reed was of tin and not bismuth. An extant white p+b set is not known to the authors. In 1832 Brevet Colonel J.B. Walbach at Frankford noted “In a few days the 1,000 Brushes & picks (yellow) will be completed as directed in your letter of the 7<sup>th</sup> June last, and as in said letter you also mention that the white mountings are abolished, I should wish to know your pleasure as to the materials which I had previously purchased to make the 5,000 Brushes & picks (white) agreeable to your direction by letter of the 16<sup>th</sup> May 1831, and of which 500 have been made. . . .” He further noted the cost to make 3,000 yellow and 200 white p+b sets had been 10 ½ and 8 cents each, respectively.<sup>22</sup> (Costs were only relative as the arsenals often omitted the overhead and financing costs contractors faced, focusing only on the direct materials and mechanics’ pay involved.) On August 4<sup>th</sup> Walbach was instruct-

The United States,  
 18 29 To Suydam & Reed Dr.  
 Apr 20 For 4 Gips Native Primings  
 Mini & Brushes @ .09 \$ 36  
 27 - 100 English Bar Fire @ .25 \$ 25  
 Coatings - - - - - .25  
 May 14 - 100 Bismuth - - @ 1/4 \$ 12.50  
 \$ 73.75

U. S. ARSENAL, Watervliet, (N. Y.) 10<sup>th</sup> June 1829  
 Received of Major GEO. TALCOTT, of the United States Army,  
 Seventy Three Dollars & Seventy five Cents  
 in full for the above account, having signed duplicates.

Suydam & Reed

Fig. 7 This June 10, 1829-dated receipt for p+b sets from Suydam & Reed indicates Frankford Arsenal did not manufacture all p+b sets used by the U.S. Army. These sets were tin plated to simulate “white metal” being used for some accoutrements. RG 217, Entry 523, Records of the General Accounting Office, 2nd Auditor, Accounts and Claims, 1817-1850, Box 306, Voucher No. 26 to Abstract C, “Disbursements for Current Expenses in the 2nd Quarter of 1829,” Account 13135—George Talcott, Maj., National Archives II, College Park, MD.

ed to attempt to exchange the tinned wire for brass wire and to dispose of any other materials on hand intended for white metal accoutrements.<sup>23</sup>

Early in the 1830s, Major Rufus L. Baker created an accoutrement production center at Allegheny Arsenal, near Pittsburgh. Anxious to replace accoutrement contractors like Robert Dingee of Yonkers, NY, Baker planned to make his own picks and brushes for accoutrement sets being fabricated at the arsenal. Certainly by 1834 he was ordering materials to construct them. A voucher to his brother, James Baker (also an assistant deputy commissary of ordnance during the War of 1812), dated November 29, 1834, includes “75# [pounds] Brass Wire @ 37½¢ ...[for] Inf. Priming Wires & Brushes [and] 20# Bristles (Russia) @ [\$]1.50”<sup>24</sup> for the same purpose. (Note this was after 1832 when all metal on accoutrements returned to brass.) Further, in April of 1837 he noted “The Brushes & picks are stated in the Regulations at Eleven cents--- They are now made much longer than formerly, and the wire and Bristles having advanced 30 per cent, they will cost about 16 cents each.”<sup>25</sup> Interestingly, p+b sets were carried in the 1834 *Regulations* at 11 cents each,<sup>26</sup> and “Old Pattern” p+b sets were still listed in the 1839 *Regulations* at 11 cents, while a “New Pattern,” possibly the pattern described in the 1841 *Ordnance Manual*, was listed in the 1839 *Regulations* at 12 cents<sup>27</sup> (Fig. 8). Only once in the archival record did the cost for p+bs approach or exceed Baker’s 16 cents. However, Baker’s comment that sets were “much longer than formerly” could suggest the addition of a second link in the upper portion of the “Chain,” before being described in the 1841 *Ordnance Manual*.

The authors believe examples with short links as described above, and **one link** at the top, likely represent what was adopted by Bomford in 1827. Examples with longer links as described above, and **two links** at the top (above the *Chain* as described be-

Extracts from “Regulations for the Government of the Ordnance Department”		Rifle Accoutrements	
1839 Edition		Old pattern, (white leather)	Dolls./cts.
<b>Infantry Accoutrements</b>			
Old pattern, (white leather)	Dolls./cts.	Rifle-pouch, (black)	.60
Cartridge-box, (black) eagle stamped, carrying 26 rounds wooden case and 16 rounds in tin case	1.10	Flask and pouch-belt	.35
Cartridge-box-belt	.52	Waist-belt	.25
Bayonet-belt	.58	Plate for waist-belt	.08
Belt-plate, round, brass, with eagle	.17	Plate for pouch and flask-belt	.08
Bayonet-scarbald, (black)	.45	Copper flask, carrying 8 oz. powder	1.50
Brush and pick, brass	.11	Minimum charger, 85 grains	
Gun sling, (russet)	.08	Maximum charger, 100 grains	
Total cost, white leather	\$3.01	Brush and pick	.11
<b>New Pattern</b>			
Cartridge-box	1.28	Gun sling, (russet)	.08
Cartridge-box-belt	.70	Cost of rifle accoutrements	\$3.05
Cartridge-box-plate	.10	<b>Add for Hall's rifle</b>	
Bayonet-scarbald	.45	Bayonet-belt	.55
Bayonet-scarbald-belt	.56	Bayonet-scarbald (black)	.45
Bayonet-belt-plate	.10	Cost of Hall's rifle accoutrements	\$4.05
Waist-belt	.25	<b>Note: Hall's flask may be used instead of the copper-flask; when properly made, its cost is about the same.</b>	
Waist-belt-plate	.10	<b>New pattern</b>	
Gun sling	.18	Rifle-pouch	.60
Brush and pick	.12	Flask and pouch-belt	.45
Total cost	\$3.84	Waist-belt	.25
Sword-belt for the infantry, (the same as for the artillery sword), white leather	\$1.50	Plate for waist-belt	.10
		Bayonet-scarbald	.45
		Bayonet-belt	.50
		Bayonet-belt-plate	.10
		Gun sling	.18
		Brush and pick	.12
		Total cost	\$2.75

Fig. 8 - From the 1839 *Ordnance Regulations*, this comparison of old and new pattern accoutrements seemingly indicates the pattern had hardly changed between 1834 and 1839. Courtesy Lee Bull

low in the 1841 *Ordnance Manual*), likely represent the “much longer” p+b sets described by Baker in 1837. With the extensive work of the Fenwick Ordnance Board during that time, a new p+b could have been adopted about that time and later described in the 1841 *Manual*. It should be noted here that co-author Gaede also has an example (included in Fig. 9, center) with 2 5/8 inch links and two links at top having an overall length of the links of 12 1/8 inches, and an overall length of 16 inches, including the socket and brush. This example may represent a transition piece be-

Fig. 9 - The left p+b is what the authors believe is the P1827 (same as shown in Fig. 6, right). The example at right is that what Baker alluded to in 1837 and was clearly described in 1841 (same as Fig. 6, left). The center p+b is a transitional piece, with short links but with two links at the top. Courtesy Fred Gaede.



tween the 1826 pattern and that described only partially in 1837, which pattern was more formally described in 1841. These three represent the authors' chronological interpretation of the archival record presented so far.

During this time the Second Seminole War (1836-42) was underway and it might be noted links have been recovered from the site of a ca. 1840 temporary ordnance depot at Garey's Ferry, Florida.<sup>28</sup> With links 2 5/8 inches long, three are shown in Fig. 10. This discovery suggests some short "old pattern [1827?]" sets were still around, perhaps at outlying arsenals in the Southern states such as at New Orleans or Charleston, which were sent to Florida as needed.

With the adoption of the 1841 *Ordnance Manual for the Use of the Officers of the United States Army*, a detailed description of the "Brush and Pick" was, at last, finally published. On page 140 under "Infantry Accoutrements," the item was fully described:



Fig. 10 Links 2 5/8 inches long recovered from a ca. 1840 Second Seminole War site in Florida. Courtesy Kevin Hooper.

**BRUSH AND PICK.** *Brush*, Russia bristles, 6 in. long, doubled—*socket*, sheet brass, 0.45 in. diameter, 1.4 long. *Pick*, iron or brass wire, 3.75 in. long—*Chain*, brass wire; 2 links, each 3.75 in. long; *wrapping*, brass wire; 2 branches for brush and pick of 2 links each, each link 3 in. long.<sup>29</sup>

Although the length of a single link is given as 3.75 inches long, when compared to existing examples it is clear that dimension did not indicate a new pattern. Rather, it is essentially the dimension of a 2 7/8 inch link *plus* an S-shaped connector, which instead, together, measure about 3.50 inches on many of the examples seen in the survey. It might also be noted the socket, if made of sheet brass, should show evidence of a solder seam in the body, and have a flat top soldered to it. It is not known if cast sockets had been abandoned by that time, which would not evidence soldering. This pattern is illustrated in Figs. 9, right, and 11.

With the adoption of the M1842 smoothbore musket with its percussion ignition system, the p+b became obsolete. The Ordnance Board, which met between February 20 and March 12, 1845, made that official by recommending that "The former picker and brush to be omitted."<sup>30</sup> Thus the p+b was not described in the text of, nor illustrated in the plates which accompanied, Captain Alfred Mordecai's 1849 *Artillery for the Land Service of the United States*.<sup>31</sup> However, during the preparation of this monumental work the war with Mexico began, and the decision was made that it was not an appropriate time to make a general issue of a new

Fig. 11 With the flat top to the socket of the brush, and long links, this is believed to be the p+b style described in the 1841 Ordnance Manual. It is the same as shown in Fig. 9, right. Courtesy Lee Bull.

infantry musket with a percussion ignition system. Not only would that have required teaching a new manual of arms for loading, it would have also required supplying percussion caps to the field (a new item of manufacture) and a change in the configuration of musket cartridges. Thus the vast majority of infantry which went to Mexico were armed with .69 caliber smooth bore flint lock muskets, and the p+b was given a reprieve! On August 7, 1845 it was ordered that Captain R.H.K. Whitely at Baton Rouge Arsenal be sent 5,000 "Brushes & picks" from St. Louis Arsenal, to accompany accoutrements "of the old pattern on hand"<sup>32</sup> which were to be held ready for issue.

As a result of the extended retention of the flintlock as the primary infantry small arm, 14,516 p+b sets were manufactured in fiscal year (through June 30) 1846; 18,200 in fiscal 1847; and 7,331 in fiscal 1848.<sup>33</sup> On May 6, 1847 Chief of Ordnance Colonel George Talcott authorized Lieutenant Dearborn at Frankford Arsenal "to extend the manufacture of brushes and picks to 20,000 and to charge the expense to the appropriation for 'Mexican Hostilities'." He was directed to send 10,000 to the New York Depot as soon as completed.<sup>34</sup> This total of 40,047 sets represented the last production of the item at Frankford.

Interestingly, even with those quantities, another time picks and brushes were **not** made at Frankford occurred during those "Hostilities." The supply of items to Mexico often lagged demand, and ordnance supplies required a place to be stored and repaired. Captain Benjamin Huger, "Acting Chief of Ordnance" for General Winfield Scott, noted in his diary in January 1848 "that part of the Citadel [of Mexico] [was] occupied by us as an Arsenal, a most convenient and very roomy establishment for all our purposes." In other entries to the diary the captain noted he had Sergeant Trainor making canister, and "plates for belts," as well as "brushes and picks, using Mexican brushes made out of Maguay."<sup>35</sup> (The latter is a tough fiber still used for rope, netting, mats, and even paper.) Huger does not further comment on these activities in his letter of April 20, 1848 to Colonel George Talcott, now formally promoted to command of the Ordnance Department, in which Huger forwards "notes prepared by Lieut. [Peter V.] Hagner, Commanding the Arsenal at this place, on the repairs required to the *matériel* in the service of the troops."<sup>36</sup>

When the M1842 musket was made general issue to the U.S. Army in April 1849, the only need for the surplus p+b sets was for state requisitions under the Militia Acts of 1808. State adjutant generals quickly clamored for percussion muskets, so any further surplus would have been auctioned at various times. Most of the examples of p+b sets for sale at relic shows today are no doubt from the surplus of the three final years of production. One firm which made good use of surplus p+b sets was W. Stokes Kirk of Philadelphia, which mounted an original military flint and a p+b set on a black-painted, shield-shaped,



wooden placard (Fig. 12), attached a hanger on the back, and originally sold this souvenir for \$1! Four of these Kirk boards were on display, one with a flat topped socket and three with domed tops; one with links 2 5/8 inch long, two with 2 7/8 inch links, and one with links, surprisingly, 3 inches long. This last may just represent a slight production variation. However, the sets on the boards likely show the diversity of what Frankford produced, what was still in store when the auctions took place, and likely what actually was sent to the field.

Mention was just made of “domed” tops to the sockets. Multiple examples brought to the meeting were noted to have this



Fig. 12 - This plaque was offered for sale by W. Stokes Kirk, Philadelphia, to add value to surplus militaria in its warehouses. The p+b used in this case is what the authors have characterized as adopted in P1827. Courtesy Lee Bull.

type shape to the top of the socket (Fig. 13). Additionally this type socket has no soldered seam, as is evident on all of those we have examined which were produced according to the pattern in the 1841 *Ordnance Manual*, with sheet brass sockets. Hence the sockets with domed tops could only have been produced by having been drawn rather than by the use of sheet brass, which had to be rolled and soldered, and then closed by soldering a disk on the tube to close one end. We believe that by the late 1840s Frankford must have had the capability to draw thin brass disks into tubes of uniform diameter, in the same manner as copper sheet was drawn into seamless tubes for friction primers at arsenals, around the close of the Mexican-American War. As Lee pointed out, this mode of manufacture was also utilized only a short time later in private industry to create copper Flobert cartridges.

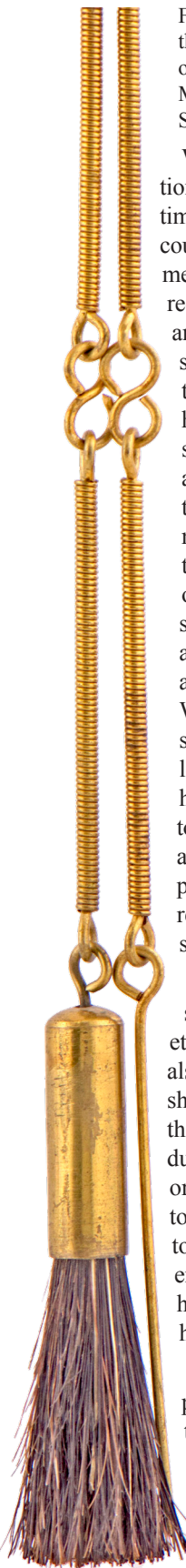


Fig. 13 With the domed top to the socket of the brush, this is believed to be the style of at least a portion of the p+b sets manufactured towards the end of the Mexican-American War at Frankford. Courtesy Rick Starbuck.

With war-time pressure to increase p+b production quickly, the need to decrease manufacturing time to make the sockets would certainly have encouraged the arsenal’s machinists to search for a method of production eliminating the hand labor required to roll and solder sockets for brushes, and the additional operation to enclose the top. It should also be noted that, save for one example, the domed top p+b’s brought to the meeting also have but one link at the top, rather than the two specified in the 1841 pattern description noted above. This modification may be explained as a time and material savings induced by war-time need. Fred has noted that the links of the domed top specimens at the meeting included lengths of both 2 5/8 inches and 2 7/8 inches. If drawn sockets were among the last of the p+b’s produced at Frankford, the 1846-1848 production may not all have exactly conformed to this last design. With the domed top socket not technically feasible when that *Manual* was prepared, whatever length and number of links the 1841 *Manual* may have called for became unimportant in the desire to ramp up production. All of this said, the authors are not prepared to unequivocally explain the appearance of dome topped sockets, nor the possible return of the single link at the top, in Army p+b sets.

Beyond the small 18th Century examples, the short linked varieties and the long linked varieties, a number of miscellaneous p+b types were also on display at our table. Several picks were on short, simple chains with wire wrapped brushes at the other end. Some were clearly modern reproductions, while others were of indeterminate age or authenticity. It is likely this version was so easy to make it probably was in widespread use up to the Civil War in militia units armed with older military weapons or flint locks brought from home. Well known, an example is not illustrated here.

One unusual version that includes a spring pick is shown in Fig. 14. A small number of this variety are known to have originated in this country at Bannerman’s. However, despite the speculation by Stephen Dorsey in his co-authored tool book that their origin was British,<sup>37</sup> whether they were made domestically or were imported remains unknown. These specimens are well made and the spring pick, to facilitate entry into the touch hole, is unique.

A final word about the pick and brush relates to how it was supported. The early attachment to cartridge box shoulder belts has been noted, and likely remained commonplace in militia units

well into the 19th century. However, for the Regular Army there is little evidence of that practice during the War of 1812, and none thereafter. Indeed, the examination of several Pattern of 1828 buff bayonet and cartridge box shoulder belts, marked as having been made at Frankford Arsenal in 1834 (one included in the display), shows no evidence of a hole for the hook of a p+b. These belts were made concurrently with the sets, and if the set were to have been hung from the belt, the latter likely would have had a hole professionally punched in the leather to retain the set. Soldiers would not have been permitted to auger a hole to do the job. An 1839 plate in Huddy & Duvall of a rifleman in the German Washington Rifle Corps of Philadelphia (Fig. 15) shows the p+b hung between buttons on the uniform coat. Through the courtesy of Dan Binder, another unique ruby ambrotype is included (Fig. 16) that was apparently taken between 1858 and 1861, well after the end of the flintlock era. The soldier has a p+b set hanging beneath his buff cartridge box shoulder belt, with the top ring likely around a button, or through a button hole under the belt. Thus the p+b was still serving on the eve of the Civil War.

We trust this survey and summary has proved worth the exercise and will spark continued interest in this “necessary little article,” the pick and brush. Again, we thank the ASAC members who brought their examples and who participated in the discussion in the Gun Room.

*We would like to thank the members who participated in this survey, as well as Frank Martin, who photographed many of the examples used as illustrations.*

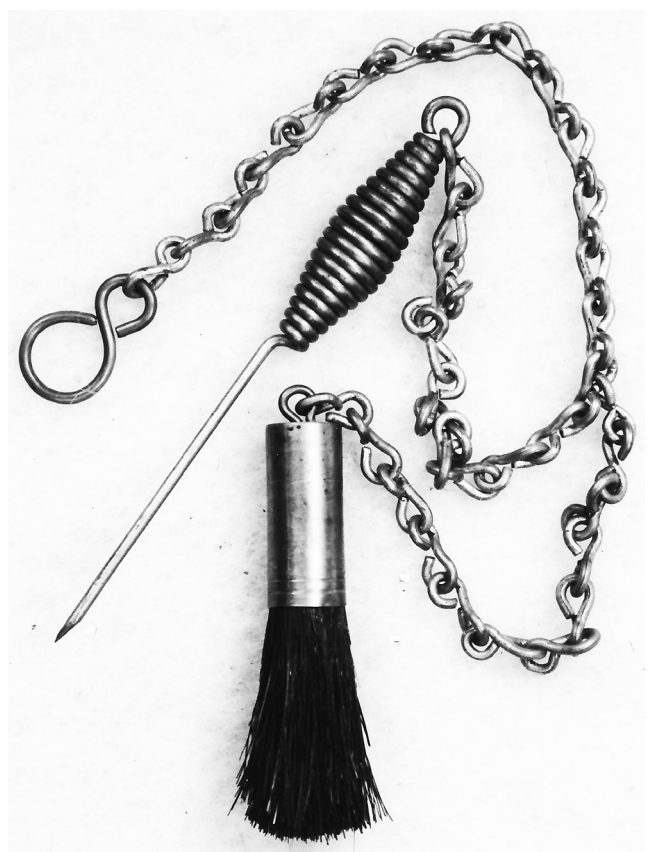


Fig. 14 This pick made of sprung brass wire may have been imported from England. We have a credible source who indicates that at least some of them were sold by Bannermans. Courtesy Lee Bull.



Fig. 15 - An 1839 plate by Huddy & Duvall of a rifleman in the German Washington Rifle Corps of Philadelphia, showing his unusual placement of the pick and brush set. Courtesy Bruce Bazelon.



Fig. 16 - This ruby ambrotype likely shows a soldier near the beginning of the Civil War, outfitted in obsolete P1839 buff accoutrements. The 1840s era pick and brush even suggests he was armed with a flint lock musket. While it looks like the p+b may be attached to the shoulder belt, more likely the large hook at the top goes through a button hole. Courtesy Dan Binder.

## NOTES

1. Hutchins & Gaede
2. Hoff, page 13, illustration no. 11
3. Rees, page 150, quotes the date of Continental Congress' approval as March 19, 1778. See also NARA, RG 93, War Department Collection of Revolutionary War Records, M823, Roll 34, "Receipt Book, March 1780 – September 1781, 82, which specifically mentions "New Constructed Cartouch Boxes for the use of the United States." See also Peterson, pages 67, 68, 78
4. Hutchins & Gaede, page 10
5. Southard, Samuel Hodgdon to Major Gostelowe, June 1, 1780
6. NARA, RG 92, Commissary General of Purchases Letter Book B, page 295, Callender Irvine to Samuel Russell, September 8, 1813
7. Maryland State Archives, Baltimore City Archives, Thomas Worrell, QM, Sixth Regiment, to John Young, May 12, 1813, bca\_brg22\_1-0372, last accessed through NPS Ft. McHenry website March 7, 2013
8. NARA, RG 92, Entry 225, CCF, "Proposals," Isaac Foster. See also *Federal Gazette* requesting proposals for "Brushes and Wires," for which "Samples will be shewn [sic] and every information given."
9. NARA, RG 92, Commissary General of Purchases Supply Orders Issued, October 1813 – June 1815, page 324, Callender Irvine to John M. Taylor, December 2, 1814
10. Undated note from Duncan Campbell to co-author Gaede which accompanied various items recovered from the dump. See also Campbell, pages 102-4
11. NARA, RG 156, Entry 21, Letters Received, 1823
12. *Ordnance Manual*, 1841, page 140
13. NARA, RG 156, Entry 21, Letters Received, 1825
14. NARA, RG 156, Entry 21, Letters Received, 1826
15. NARA, RG 156, Entry 21, Letters Received, 1826
16. NARA, RG 156, Entry 6, Letters Sent to Ordnance Officers, 1826
17. NARA, RG 156, Entry 21, Letters Received, 1827
18. NARA, RG 156, Entry 6, Letters Sent to Ordnance Officers, 1827
19. NARA, RG 156, Entry 21, Letters Received, 1827
20. NARA, RG 156, Entry 6, Letters Sent to Ordnance Officers, 1828
21. NARA, RG 217, Accounting Offices of the Department of the Treasury, Entry 523, Talcott, 1829
22. NARA, RG 156, E 1234, Frankford Arsenal, Letters Sent, 1832
23. NARA, RG 156, Entry 6, Letters Sent to Ordnance Officers, 1832
24. NARA, RG 217, Accounting Offices of the Department of the Treasury, Entry 523, Baker, 1834
25. NARA, RG 156, Entry 21, Letters Received, 1837
26. *Regulations*, 1834, page 53
27. *Regulations*, 1839, page 51
28. Personal correspondence from Kevin Hooper to the author, January 6, 2016
29. *Ordnance Manual*, 1841, page 140
30. Benét, *Collection*, II, page 38
31. Mordecai, *Artillery*
32. NARA, RG 156, Entry 6, Letters Sent to Ordnance Officers, 1845
33. Benét, *Collection*, II, pages 121, 123, 185, 249
34. NARA, RG 156, Entry 6, Letters Sent to Ordnance Officers, 1847
35. University of Virginia, Papers of Benjamin Huger, Diary transcription made by Jim Hutchins from microfilms M-2277-2279
36. NARA, RG 156, Entry 21, Letters Received, 1848
37. Shaffer, page 79

## GAEDE & BULL BIBLIOGRAPHY FOR ASAC BULLETIN

- Benét, Stephen V., *A Collection of Annual Reports and Other Important Papers Relating to the Ordnance Department*, Washington, GPO, 4 volumes, 1878-1890
- Campbell, J. Duncan, "A War of 1812 Military Trash Pit," *Military Collector & Historian*, Vol. 7, No. 4 (Winter 1955)
- Federal Gazette*, December 1, 1814, "Proposals ... J. Calhoun, Jr., Deputy Commissary of Purchases."
- Hutchins, James S. & Gaede, Frederick C., "Notes on Picks & Brushes," *Military Collector & Historian*, Vol. 44, No. 1 (Spring 1992)
- Hoff, Arne, Ph.D., *Feuerwaffen, Klinkhardt & Biermann*, Braunschweig, 1969
- Maryland State Archives, Annapolis, MD
- Baltimore City Archives, War of 1812 Miscellaneous Records
- Mordecai, Alfred, *Artillery for the Land Service of the United States*, Washington, 1849
- National Archives and Records Administration (NARA), Washington, DC
- Record Group (RG) 92, Office of the Quartermaster General (OQMG), Entry 225, Consolidated Correspondence Files (CCF)
- RG 93, War Department Collection of Revolutionary War Records
- RG 156, Office of the Chief of Ordnance (OCO)
- Entry 3, Letters Sent
- Entry 6, Letters Sent to Ordnance Officers
- Entry 21, Letters Received
- Entry 1234, Frankford Arsenal, Letters Sent
- RG 217, Accounting Offices of the Department of the Treasury, Entry 523
- Peterson, Harold L., *The Book of the Continental Soldier*, Stackpole Books, Harrisburg, 1968
- Rees, John, "On the Use of Tin Cartridge Boxes in the Continental Army," *Military Collector & Historian*, Vol. 42, No. 4 (Winter 1990)
- Shaffer, James B., Lee A. Rutledge & R. Stephen Dorsey, *Gun tools: Their History and Identification*, Collectors Library, 1992
- Southard, Lewis, email dated June 16, 2017
- University of Virginia, Charlottesville, VA.
- Papers of Benjamin Huger, Manuscripts covering 1780-1877, Bulk covering 1821-77. Uncited transcription made by James S. Hutchins from microfilms M-2277-2279
- War Department
- Regulations for the Government of the Ordnance Department, Washington, 1834
- Regulations for the Government of the Ordnance Department, Washington, 1839
- Ordnance Manual, Washington, 1841