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THIRTEEN-STAR FLAGS

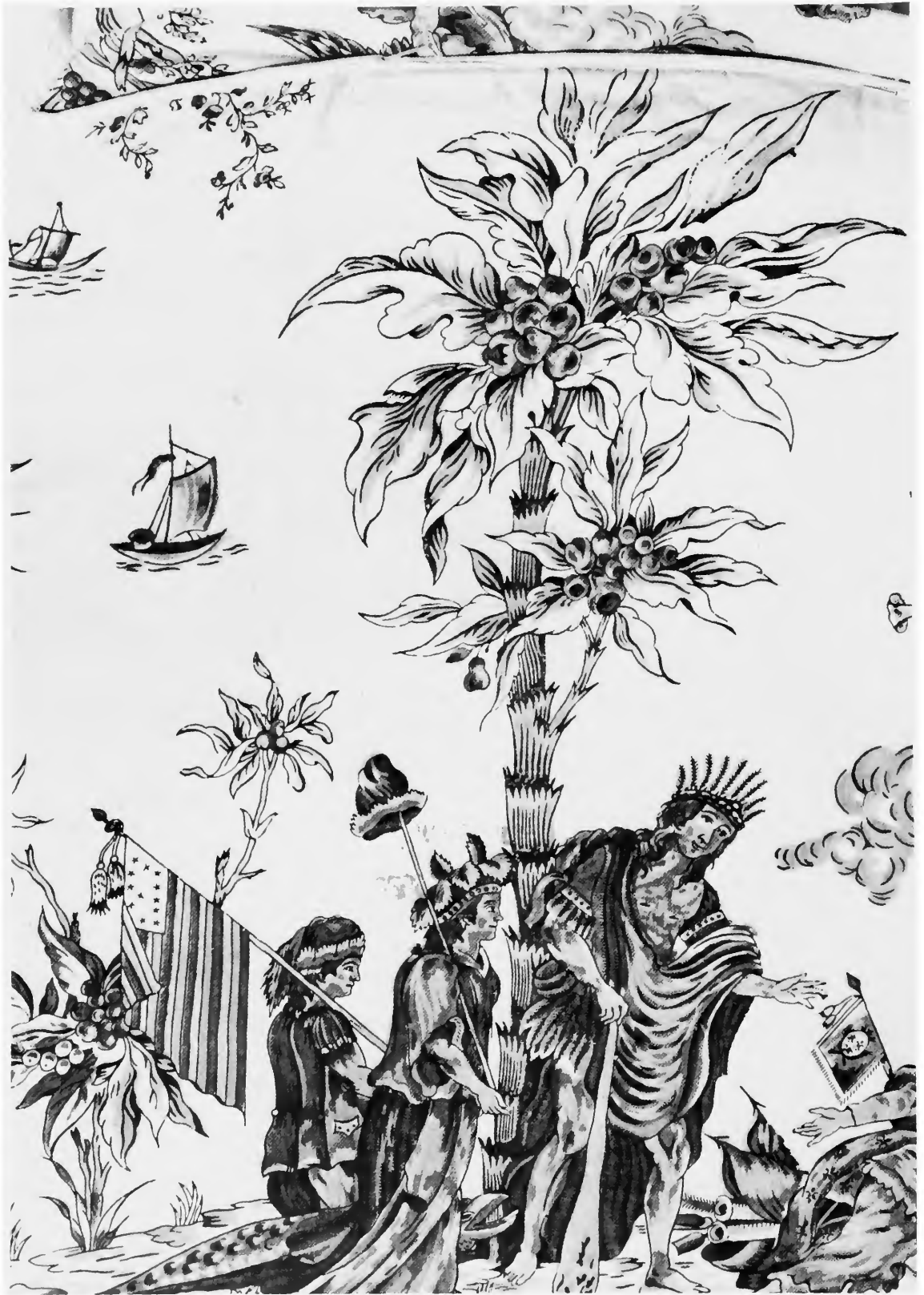
KEYS TO IDENTIFICATION

Grace Rogers Cooper



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Official publication date is handstamped in a limited number of initial copies and is recorded in the Institution's annual report, Smithsonian Year.

Library of Congress Cataloging in Publication Data

Cooper, Grace Rogers

Thirteen-star flags: Keys to identification

(Smithsonian studies in history and technology, no. 21)

Bibliography: p.

1. Flags—United States. I. Title. II. Series: Smithsonian Institution. Smithsonian studies in history and technology, no. 21.

GR113.072 929.9'0973 72-8229

For sale by the Superintendent of Documents, U.S. Government Printing Office,
Washington, D.C. 20402 Price \$3.00 domestic postpaid or \$2.75 GPO Bookstore
Stock Number 4700-0232

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TO SANFORD LEE COOPER

Preface

The first time I had reason to question the date of a thirteen-star flag was in 1947. The one examined was stitched by machine and, because of that, obviously was not an eighteenth-century flag. The stars were arranged in a 3-2-3-2-3 arrangement. Knowing very little about documenting flags at that time, I questioned the then curator of history, Theodore T. Belote, whether a flag could be dated by the star arrangement. In discussing the more popular arrangements, Mr. Belote stated that the “thirteen-star flag was used as a small boat ensign from 1795 to about 1916.” Currently, in trying to document his statement for publication, I found that this was one of those facts that is “known,” but difficult to establish positively. In 1970, Captain Edmund A. Crenshaw, Jr., vice president of the Germantown Historical Society and curator of its museum in Philadelphia, wrote in answer to my query: “That type [thirteen-star flag] was used for smaller vessels, torpedo boats, submarines and ships boats as far back as I can remember.” In his letter of December 3, 1970, when Captain Crenshaw was seventy-nine years old, he continued, “. . . it was stopped by Franklin Roosevelt for some reason.” Since Franklin Roosevelt was assistant secretary of the navy in 1916, the year may be fairly accurate; however, the observation of Dr. Harold Langley, present curator of naval history in the Smithsonian Institution’s National Museum of History and Technology, is that individual captains may have continued to use the thirteen-star flag. Dr. Langley also pointed out that manufacturers who had filled navy contracts may have continued to manufacture these flags after 1916. The United States Navy, however, considers that officially it has followed each Flag Act using the number of stars representing the number of states in the Union, and cites a regulation issued in 1890 reaffirming this. Nevertheless, there is an Executive Order (number 1637) issued by President William Howard Taft and dated October 29, 1912, which states:

Boat Flags: In order that the identity of the stars in flags when carried by small boats belonging to the Government may be preserved, the custom holding in the Navy for many years, of thirteen (13) stars for boat flags, is hereby approved.

This confirms that the thirteen-star flag was in use through 1912 and probably longer.

Thirteen-Star Flags

KEYS TO IDENTIFICATION

Thirteen-star flags are not rare. Although these flags were the official banner only from 1777 to 1795, they continued to be made throughout the nineteenth and into the twentieth century. They were used by the navy and, on occasion, by the military regiments as well as by patriotic Americans for early commemorative celebrations and as centennial souvenirs. The natural changes that occurred in the manufactured components and the methods of making the flags offer important keys to their dating.

The Author: *Grace Rogers Cooper is the curator of textiles in the Smithsonian Institution's National Museum of History and Technology.*

Introduction

American flags are very special to most American citizens. For this reason, no one seems to question the age of a family-treasured, thirteen-star flag handed down from a previous generation and said to be an original eighteenth-century artifact. In truth, it may have been saved only as a commemorative souvenir. Certainly, there was no original intent to defraud when a grandfather reported that his father had given him "his flag" and told him it was "like the one" under which his forefathers had fought for independence. In two generations, however, this story frequently changes and the flag becomes an original Revolutionary War flag which was carried by a specific ancestor in a specific battle. All of this seems to be the result of a natural eagerness to own a part of the physical evidence of our national heritage.

Contrary to popular belief, thirteen-star flags are not rare. They were made over a longer period of time than any of the starry ensigns that were ever used as our national insignia. Although the thirteen-star flag was officially the national banner from the Flag Act of 1777 until 1795 (Appendix

1), it continued to be manufactured for many years for several good and acceptable reasons. Small boats of the United States Navy used it as an ensign from 1795 until about 1916. Also, thirteen-star flags continued to be made for many commemorative events during the nineteenth and twentieth centuries. This practice may have commenced as early as the time of George Washington's death in 1799. It was certainly true at the time of the Marquis de Lafayette's visit in 1824-1825, for the centennial of Washington's birth in 1832, and for the many later centennials and commemorative occasions.

Before attempting to establish the date of a thirteen-star flag, it is wise to have some background information about the history of this flag. The best single source is *The History of the United States Flag from the Revolution to the Present, Including a Guide to its Use and Display* by Milo M. Quaife, Melvin J. Weig, and Roy E. Appleman, which was published in 1961. This book, of necessity, discounts a few myths. Unfortunately, much of our American history was clouded by zealous, nineteenth-century imaginations.



Figure 1. The thirteen-star flag became a popular design feature on a number of commemorative fabrics printed in France for the United States market. In the English-produced commemoratives the thirteen-star flag is not used, but rather the earlier thirteen-stripe flag or the rattlesnake flag.

This detail is from a furniture cover, circa 1790, made of a French block-printed cotton, the design of which is an adaptation of the Jouy (France) copperplate-printed cotton produced by the Oberkampf factory entitled “L’Hommage de l’Amérique a la France” first produced in 1786. The flags of the United States and France are prominently displayed. In the copperplate design, there are thirteen stripes (red and white); in the block-printed version the flipped corner would suggest more than thirteen, although hopefully this was poor perspective on the part of the designer. In the one illustrated here, the stripes are printed in two shades of red plus the white indicating a tricolor design. The stars in the copperplate fabric of this design appear to be in rows of 4-5-4, while in this version there are twelve in a square—one is hidden by the overturned corner—with the thirteenth in the center. It is presumed that both flag designs, representing the new American states, were known to French fabric designers. (In the collections of the Division of Textiles, T.11578. Smithsonian photo 77780.)

Although the authors of this book refute the Betsy Ross story, they nevertheless label an illustration of the thirteen-star-circle flag as the “Popular or Betsy Ross Version of the United States Flag, Revolutionary War Period.” This writer believes that by doing this, they weaken their documented evidence against the story; however, the most significant illustrations in their book are of flags in documented renderings.

The first Flag Act of June 14, 1777, only

provided “that the flag of the thirteen United States be thirteen stripes, alternate red and white: that the union be thirteen stars, white in a blue field, representing a new constellation . . .” The specific intent, if there was one, in just how these stars were to be arranged is unknown. The members of Congress probably had no thought or desire to regulate this feature. The design, how the flag is put together, and the fabrics to be used were not provided by this Flag Act.

Thirteen-Star Flag Design in the Eighteenth Century

The arrangement of the stars is basically the only design feature that can be considered in a thirteen-star flag. There are differences in the arrangement of the colors of the stripes, but these offer relatively few possibilities. From the early illustrations extant, one can see just how varied the star arrangements were. In a number of ways, the stars themselves are shown differently. Of the variety of arrangements of stars, the two most commonly found are the 4-5-4 and the 3-2-3-2-3. Interestingly, the earliest artist renderings of American flags show one of each of the two types. These drawings were made by a Dutchman in 1779. They are of navy ensigns on the ships of John Paul Jones, the *Alliance* and the captured *Serapis*. The drawings were preserved in the shipping offices at the harbor of Texel in Holland. These drawings, now preserved by the Chicago Historical Society, came to light in 1921 as the result of the work of Commander Byron McCandless, U.S.N. Both illustrations are in the Quai, Weig, and Appleman book, and a careful account of the drawings and their discovery can be found in Frank Earl Schermerhorn's *American and French Flags of the Revolution, 1775-1783*. Lafayette had sailed to Holland on the *Alliance* early in the year 1779 and was about to return to America. The flag which was flown on this American vessel had thirteen eight-pointed stars in a 3-2-3-2-3 arrangement, with thirteen alternate red-and-white stripes. It can be assumed that the flag she flew would be more typical of those in use. The flag sketched as flying from the *Serapis* also had thirteen eight-pointed stars, but these were in a 4-5-4 arrangement. The union is smaller, being only the width of five stripes with eight stripes below. The thirteen stripes are red, white, and blue, irregularly arranged: blue, red, white,

red, white, blue, red, white, red, blue, white, blue, and red. Although the Flag Act specified stripes of red and white, this use of blue as a third color in the stripes was not an isolated example. Two eminent Americans of the period described the flag with such stripes. In a letter dated October 9, 1778, signed by Benjamin Franklin and John Adams and sent from Paris to the King of Two Sicilies, they wrote:

It is with pleasure that we acquaint Your Excellency that the flag of the United States of America consists of 13 stripes, alternately red, white, and blue; a small square in the upper angle, next the flag staff, is a blue field, with 13 white stars, denoting a new Constellation. Some of the States have vessels of war distinct from those of the United States. For example, the vessels of war of the State of Massachusetts Bay have sometimes a pine tree; and those of South Carolina a rattlesnake, in the middle of the 13 stripes; but the Flag of the United States, ordained by Congress, is the 13 stripes and 13 stars above described.¹

The fact that these earliest examples of thirteen-star flags were used by the navy is not surprising. Even George Washington repeatedly requested national colors, but there is no record that he ever received them.² America followed the flag precedents of Europe with the navy more or less adopting and flying the Stars and Stripes shortly after the Flag Act. The army, however, used regimental or state banners evading the national standard or using substitutes. It was not until 1834 that the army field artillery was permitted to carry the Stars and Stripes, and it was not until 1841 that the infantry regiments did so.³

In addition to the drawings made at Texel, Holland, there are a number of known illustrations of the American flag that were produced in the early 1780s. Of these, three printed flag sheets,

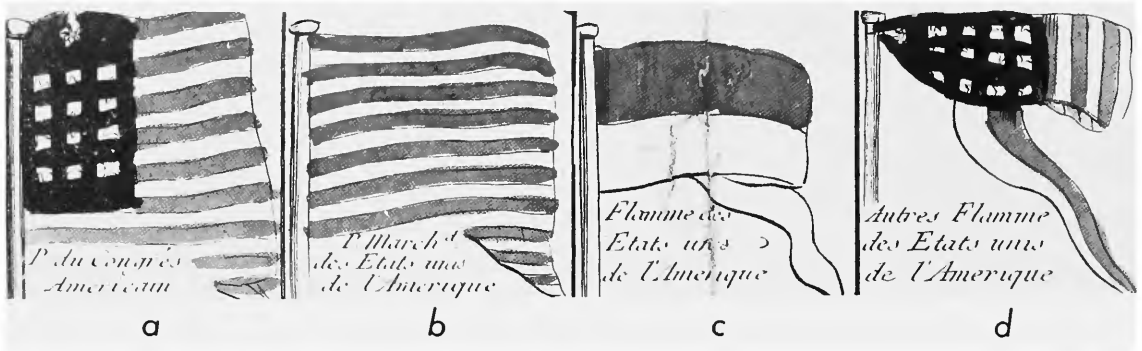


Figure 2. Mondhare flag sheet, 1781: *a*, flag of the American Congress; *b*, merchant flag of the United States of America; *c*, pendant of the United States of America; and *d*, another pendant of the United States of America. (Courtesy John Carter Brown Library.)

two maps, and an almanac were executed before the end of the Revolutionary War. The first is the Mondhare flag sheet (Figure 2), whose title is "Tableau de tous les Pavillons que lon arbore sur les Vaisseaux dans Quatre Parties du Monde avec une Explication de tous les Agres et Manoeuvres des Vaisseaux 1781." This sheet, preserved in the John Carter Brown Library at Brown University, is quite large, two feet one inch by three feet. Following the illustrations of the other flags of the world appears the emblem of the newest among the nations, the Stars and Stripes—designated the flag of the American Congress. The stars are five-pointed ones and are arranged 1-3-3-3-3. When the original print was colored, the illuminator painted a fleur-de-lis over the single star on the first row. This prerogative seems permissible since the French Alliance brought about the addition of the American flag to the flags of the world. There are three other American flags also illustrated on this sheet: a mercantile flag of thirteen stripes only, a pennant of a single red and a single white stripe captioned "Flamme des Etats unis d'Amérique," and a second pennant with a blue field on which appears a fleur-de-lis and twelve stars with an indeterminable number of vertical red and white stripes and ending in the single red and single white horizontal stripes of the previous pennant. This second pennant is captioned "Autres Flamme des Etats unis de L'Amérique," possibly inferring that it was the less common of the two.

Another flag sheet in the John Carter Brown Library, attributed to publication shortly after

1781, was the "Flaggen aller Seefahrenden Potensen und Nationen in der gantzen Welt... (vorgestellt von Matthaues Seutter in Augspurg [sic])" published by Tobias Conrad Lotter (Figure 3). The American flag illustrated has thirteen six-pointed stars arranged in a 3-3-3-1 design and, in addition, has a fleur-de-lis at the top. The third flag sheet published in London in 1783, entitled "Bowles Universal Display of Naval Flags," shows the American flag with thirteen five-pointed stars in a 3-2-3-2-3 plan. The *Town and Country Almanack* published by Abraham Weatherwise in 1782 shows the five-pointed stars in an unusual 3-5-5 arrangement. Both the Sebastian Bauman map of 1782, "This Plan of the investment of York," copies of which are in the Phelps Stokes Collection in the New York Public Library and in the John Carter Brown Library, and the John Wallis 1783 map of the "United States of America" have the more common 3-2-3-2-3 arrangement of stars, the former with six-pointed ones and the latter blurred.⁴

There are a number of additional documented publications of the late eighteenth century which include illustrations of the American flag. One important one is in the manuscript collection of the Library of Congress. It is the original drawing by Major L'Enfant for The Society of the Cincinnati diploma, adopted by them on June 10, 1783. As can be seen in Figure 4, the thirteen stars in the field are in an oval, which may have been an interpretation of the circle of stars. The engraved diploma, however, was to have a flag of a different design.⁵ Other designs of the 1780s which are in

the John Carter Brown Library include an illustration of the flag in *Lady Harriet's Ackland*, an aquatint published in London in 1784 in which the stars are too obscure to determine the arrangement; Abel Buell's *A New and Correct Map of the United States*, published in New Haven, Connecticut, in 1784, which illustrates thirteen five-pointed stars in a 3-2-3-2-3 plan; and M. C. Sprengel's *Allgemeines historisches Taschenbuch . . . enthaltend für 1784 die Geschichte der Revolution von Nord-America*, published in Berlin in late 1783 or early 1784, which shows the same type of stars and arrangement; while Francis Bailey's *Pocket Almanack* of 1784⁶ shows the 4-5-4 star layout.

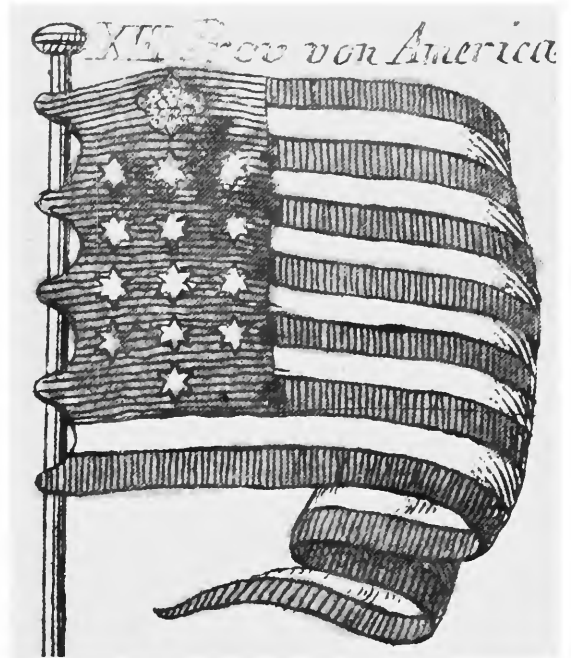


Figure 3. Lotter flag sheet, circa 1782, showing the flag of the province of America. (Courtesy John Carter Brown Library.)

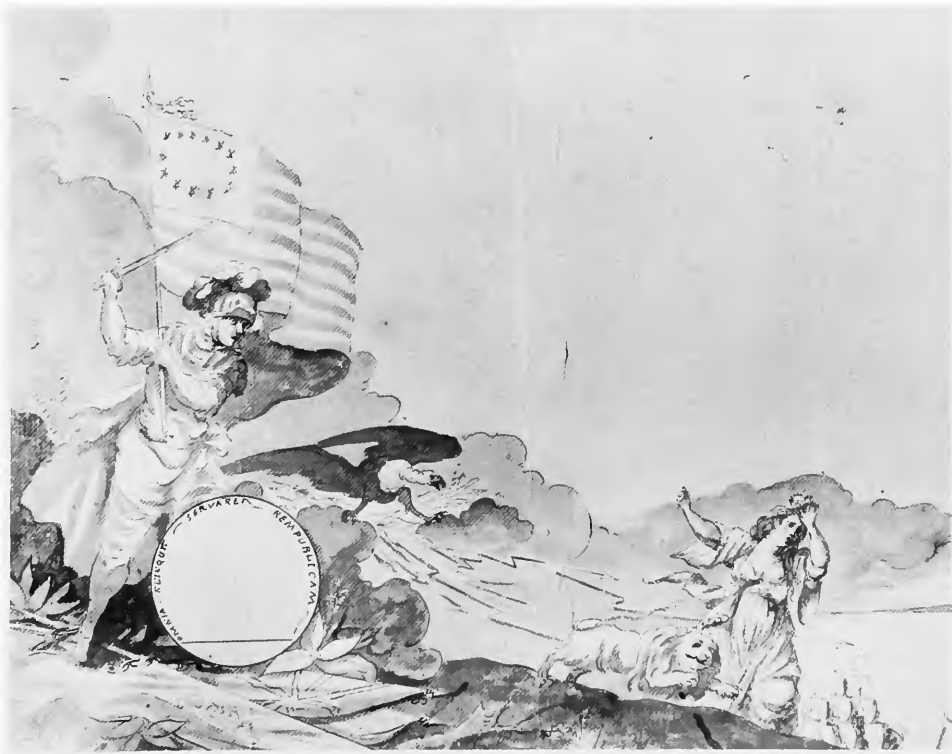


Figure 4. Detail from an original drawing by Major Pierre Charles L'Enfant for the diploma adopted by The Society of the Cincinnati on June 10, 1783. The drawing is in the Library of Congress. (Photograph courtesy of the owner, The Society of the Cincinnati.)

Contemporary paintings also offer some clues to the types and varieties of thirteen-star flags of the late eighteenth century. In Gustav Eisen's *Portraits of Washington*, the Peale portrait of Washington in the *Battle of Trenton* in The Metropolitan Museum of Art collection is used as the frontispiece for volume two. It is attributed to the period 1779-1782, and it shows the familiar circlet of thirteen stars on the blue field of a white banner. There are no stripes. Since this was classified as a "small size for a larger canvas," the artist may not have felt it necessary to include the red and white stripes. Interestingly, the full-size canvases of this painting of Washington at Trenton show the flag without the white banner; the circlet of thirteen stars is on a blue banner. To what extent Peale was exercising artistic license is not known. Eisen also describes the Peale portrait of Washington (Nassau Hall collection), which was painted between December 10, 1783, and Septem-

ber 30, 1784. This, he claims to be "the first introduction by Peale of the stripes standards in his Washington portraits." The painting is pictured and further described as "the United States standard, the thirteen red and white stripes, but with an eagle in the canton of blue." Although not mentioned in Eisen's description, the viewer will also note an indeterminable number of stars in the blue field.

This design, with the eagle and stars in the canton or union together with the alternate red and white stripes making up the main body of the flag, may well have been one of the more common early designs for national flags. It continued in use in the nineteenth century as late as the 1840s. Without the red and white stripes, it was used as a regiment flag. Peale used it again in his painting of *Washington at Yorktown*, now housed in the State House in Annapolis. In the catalog description of Peale's Portrait Exhibition at the Pennsylvania

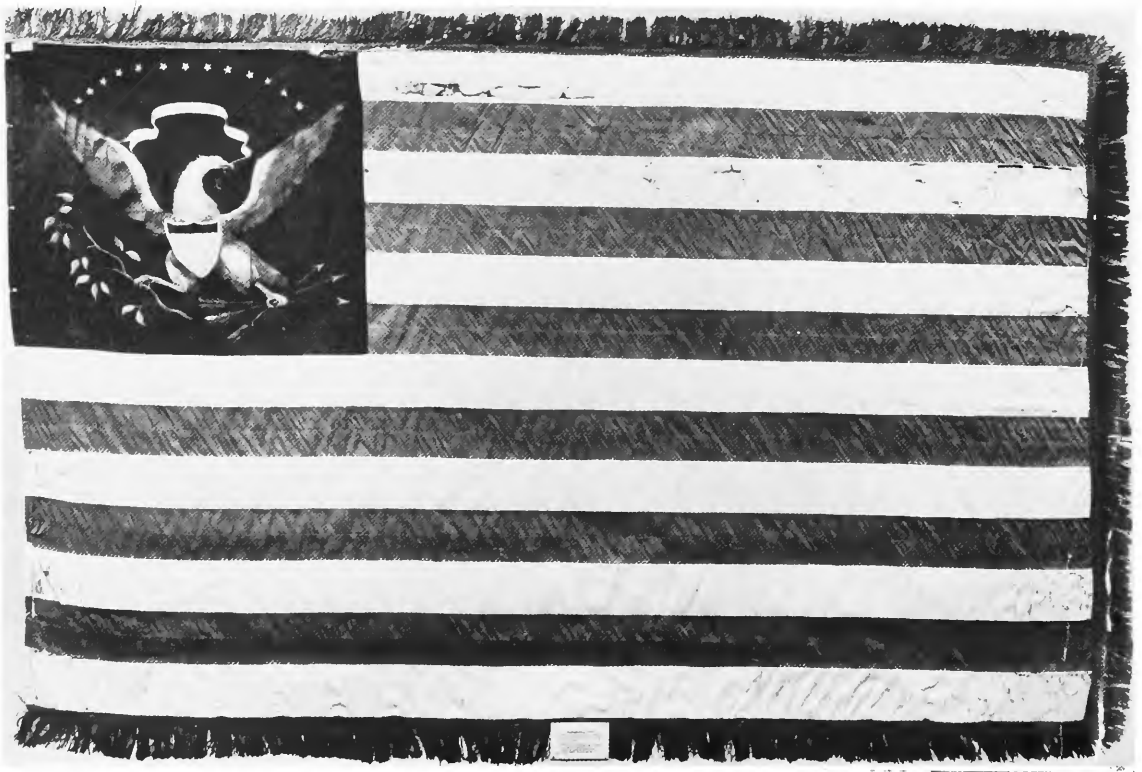


Figure 5. The "Schuyler Flag," a silk flag possibly dating as early as 1784, exhibited in the Army-Navy Museum at Independence National Historical Park, Philadelphia. This flag may well be the earliest example of a thirteen-star, thirteen-stripe flag in existence and represents the style with the eagle in the field that is frequently found in early art renderings. (Courtesy Independence National Historical Park, Philadelphia.)

Academy of the Fine Arts held in Philadelphia in 1923, the flag is described as a regimental standard; however, there is no flag that approaches this description in the Gherardi Davis work *Regimental Colors in the War of the Revolution*. Just how the adoption in 1782 of the Seal of the United States, with the spread eagle and stars, and the use of the eagle in the union or canton in 1784 correlate, is not known. The proximity of dates is too close to have been mere chance. The same thirteen star flag—actually the number of stars in such a flag is not discernable—with the eagle in the union and thirteen red and white stripes appears in the Charles Willson Peale portrait of Samuel Smith (1752-1839). The specific date of this painting in the Independence Hall collection in Philadelphia has not been established. This arrangement was also used on the engraved version of the diploma of The Society of the Cincinnati, although as previously mentioned the original drawing had shown only stars in the union.⁷ The eagle and stars also appear in a flag on exhibit in the Army-Navy Museum, Independence National Historical Park in Philadelphia (Figure 5), and in the flag held by



Figure 6. *Miss Liberty*, circa 1815, a watercolor on paper, painted as a tribute to “Liberty and Independence Ever Glorious Memory, United States of America 1776,” with a representation of the stars and stripes with the eagle in the union. (Courtesy of the Abby Aldrich Rockefeller Folk Art Collection, Williamsburg, Virginia.)



Figure 7. *Death of General Mercer at the Battle of Princeton, January 3, 1777*, painted by John Trumbull (American, 1756-1843), showing two American flags with twelve stars in a square and the thirteenth in the center. (Courtesy of the Yale University Art Gallery.)

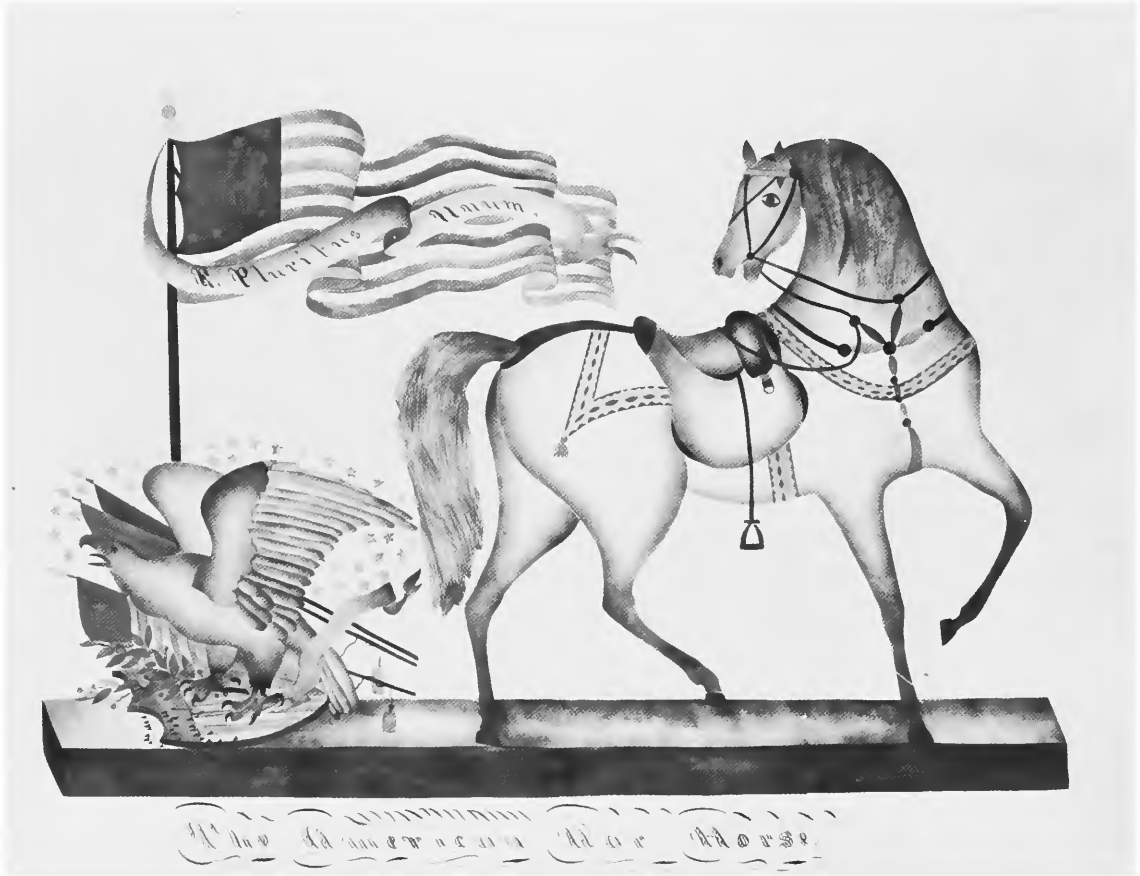
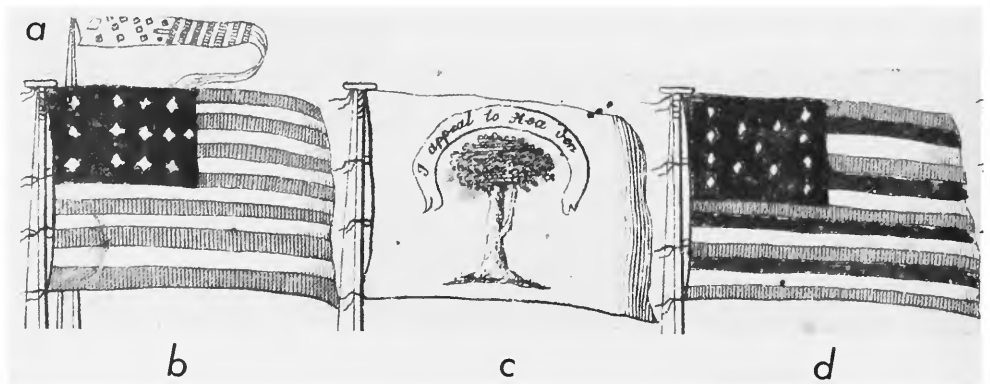


Figure 8. An American primitive painting of the early nineteenth century, *The American War Horse*, from the Edgar William and Bernice Chrysler Garbisch collection, showing the American flag with twelve stars in a square and the thirteenth in the center. (Courtesy of the Edgar William and Bernice Chrysler Garbisch Collection, The Columbus Gallery of Fine Arts.)



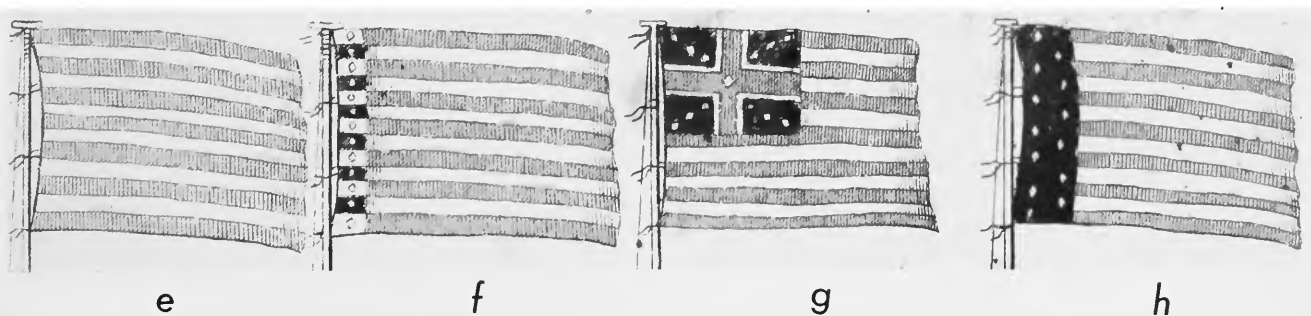
“Miss Liberty” (Figure 6). The latter is a watercolor on paper in the Abby Aldrich Rockefeller Folk Art Collection, Colonial Williamsburg, which was drawn about 1815. The painting is a tribute to “Liberty and Independence. Ever Glorious Memory, United States America 1776.” Although painted in the early nineteenth century, it is intended to represent an eighteenth-century flag.

In John Trumbull’s paintings, the battle of Princeton (Figure 7) and the surrender at Saratoga, of the 1780s, and also in his Capitol rotunda paintings (1816-1824), the stars are arranged as twelve in a square with the thirteenth in the center. This design, which seems to have been forgotten in the annals of history, may well have been a common one. Twelve stars in a square would certainly be a logical arrangement and would be easy for the seamstress to plan and execute. There is an oil-on-wood painting on permanent exhibition at the Smithsonian Institution of the Revolutionary War privateer *Hazard* of Salem (date unknown) which shows twelve stars in a square with the thirteenth at a distorted angle on the uppermost side of the union. An actual flag like this would have been unlikely. While it is logical to put twelve stars in a square, it would not be logical to put the thirteenth outside the square. The artist, who is unidentified as to period, probably misinterpreted an earlier drawing. Folk


artists of the early nineteenth century, who were inclined to paint what they saw, continued to paint twelve stars in a square with one in the center. One in the Edgar William and Bernice Chrysler Garbisch collection in The Columbus Gallery of Fine Arts in Columbus, Ohio, is entitled *The American War Horse* (Figure 8). It is attributed to the first quarter of the nineteenth century and shows the square of twelve with a large star in the center. This is the design that may have led to the painting of the stars in a circle. There is certainly an illusion of a circle when one looks at twelve stars in a square, especially on a piece of fabric not held taut. Once the stars are in a circle, there is no need to allow for the extra one in the center—a design which came into limited use in the nineteenth century.

In 1792, Trumbull painted thirteen stars in a circle in his *General George Washington at Trenton* in the Yale University Art Gallery. In his unfinished rendition of the *Surrender of Cornwallis at Yorktown*,⁸ date not established, the circle of stars is suggested and one star shows six points while the thirteen stripes are of red, white, and blue. How accurately the artist depicted the star design that he saw is not known. At times, he may have offered a poetic version of the flag he was interpreting which was later copied by the flag maker. The flag sheets and the artists do not agree.

Figure 9. Scotti Flag Sheet, 1796, showing seven flags of the United States of America and one pendant: *a*, small pendant at top, note similarity to Mondhare pendant; *b*, a 4-5-4 star arrangement, but with the fifth star in the second row set to the right and thirteen red and white stripes; *c*, the “Appeal to Heaven” flag; *d*, the stars in a 4-2-1-2-4 (horizontal) arrangement with thirteen red, white, and blue stripes; *e*, thirteen red and white stripes; *f*, a single vertical row of thirteen stars alternating in small individual fields of blue and white opposite each of the thirteen red and white stripes; *g*, similar to the Grand Union Flag, with the red cross, and with the thirteen stars forming the white cross; *h*, two vertical rows of stars, with seven in the first and six in the second. (Courtesy of the John Carter Brown Library.)



Summary of Eighteenth-Century Flag Design

Star arrangement	Number of star points	Colors of stripe	Earliest usage	
<pre> * * * * * * * * * * * * *</pre>	3-2-3-2-3	8	red, white	1779
	3-2-3-2-3	6	red, white	1782
	3-2-3-2-3	5	red, white	1783
	3-2-3-2-3	6	red, white, blue	1793
<pre> * * * * * * * * * * * * *</pre>	4-5-4	8	red, white, blue	1779
	4-5-4	4	red, white	1796
<pre> * * * * * * * * * * * * *</pre>	1-3-3-3-3	5	red, white	1781
<pre> * * * * * * * * * * * * *</pre>	3-3-3-3-1	6	red, white	1781
<pre> * * * * * * * * * * * * *</pre> 	Thirteen stars and eagle		red, white	1784
<pre> * * * * * * * * * * * * *</pre>	3-5-5 (vertical)	5	red, white	1782
<pre> * * * * * * * * * * * *</pre>		6	red, white	1780s

Star arrangement	Number of star points	Colors of stripe	Earliest usage
<p>4-2-1-2-4 (horizontal)</p>	4	red, white	1796
<p>13 in a vertical row</p>	4	alternating blue and white fields red, white stripes	1796
<p>modified Union-Jack</p>	4	red, white	1796
<p>7-6 (horizontal)</p>	4	red, white	1796
<p>not visible</p>	not visible	red, white	1792
	6	red, white, blue	179[?]

The thirteen-star flags depicted by the eighteenth-century artists are not shown on the flag sheets, and the United States flags imprinted on the eighteenth-century flag sheets are not found in the eighteenth-century paintings. The documented illustrations of the 1790s repeat the arrangements of the previous decade and introduce new ones. Another flag sheet published in 1793 at Augsburg, Germany, this time by Mathieu Alber and George F. Lotter—under a title quite like that of the Mondhare sheet⁹—shows three American flags. Although these are labeled like those on the Mondhare sheet, the flags illustrated differ in several respects. The one captioned “P. du Congrès Americain” has thirteen six-pointed stars in a 3-2-3-2-3, while in place of red and white stripes there appears in regular order red, blue, white, red, blue, white, red, blue, white, red, blue, white, and a final red stripe to make the thirteen. The mercantile flag of stripes only repeats the same red, blue, and white arrangement. While the third is labeled “Autres Flamme des Etats unis de L’Amerique,” it is not another pennant as in the

Mondhare sheet, but the only one shown; however, it is of interest. In addition to the thirteen six-pointed stars in a 3-2-3-2-3 arrangement, it also has thirteen vertical stripes in red, blue, and white, and ends in a tricolor horizontal band, with the blue stopping and ending in tails of red and white.

The flag sheet that offers the greatest variety of designs of the American flag of the period is in the Brown University Library. Published in 1796, it is entitled. “Tavola delle piu esatte, edusitate Bandiere . . . Vinco. Scotti di Livonno l’Anno 1796” (Figure 9). Five different designs of thirteen-star and thirteen-stripe flags, all with four-pointed stars, are illustrated. One is a variation of the more common 4-5-4. Four are new designs which, to date, have not been found in any early publications. One is a 4-2-1-2-4 (horizontal), another is of thirteen stars in a vertical row in alternating blue and white fields. The third is a modification of the Union Jack with one star in the center and three stars radiating out to each corner of the field, while the fourth has only two vertical rows of stars—the first with seven and the second with six.

Fabrics and Stitching Methods

Contemporary references to the types of fabrics used in the making of flags in the eighteenth century are meager. There is scarcely any specific information about how they were put together, the types of seams used, or any of the other details that would help in identifying unknowns. Since there are very few, if any, thirteen-star flags surviving from the Revolutionary War period—and not many from the very late eighteenth century—knowledge of the details are necessarily limited to general information about the fabrics, thread, and sewing techniques that are known to have been in use and applicable to this type of article.

The specific fabric references that can be cited relate to the silk regimental banners. Gherardi Davis reports in his *Regimental Colors in the War of the Revolution* that, without exception, these flags seem to have been of silk. He states that although these flags sometimes had thirteen stars, they usually did not have thirteen stripes and were not the result of the national Flag Act. They were not national banners, but were state or local regimental colors. Despite the fact that such flags are not being considered in this study, mention will be made of a few for they do offer some idea of the fabrics of the period from which these types of flags were made.

First R. I. Regiment . . . thirteen gold stars (5-pointed) . . . in the center of the flag is a blue anchor sewed on the silk.

Second R. I. Regiment

This flag is also of white silk, with thirteen small white stars (5-pointed) arranged . . . on a blue canton.

Second Battalion, 2nd Conn. Regiment

The flag is of dark red silk.

Third Webb's Regiment

The flag is of yellow silk.

Tallmadge's Dragoons

The Pink Standard is about 2½ feet square and is of thin, fine silk. The Blue Stand-

ard . . . gold stripes painted on the blue silk.

Third New York Regiment

The flag, which was made in 1778 or 1779, is about six feet square and is of dark blue silk.

The Westmoreland County Battalion (Pennsylvania)

The flag . . . which was raised by John Proctor in 1775 . . . measures six feet four inches by five feet ten inches and is of red silk.

The Pulaski Standard (Maryland)

This, the only existing Maryland color, is a small embroidered standard . . . This little standard is a trifle over eighteen inches square, and is of double silk, originally red, now faded to brownish red. The embroidery is in yellow silk.

The Eutaw Standard (South Carolina)

. . . belonged to Colonel William Washington's Cavalry troop. It is a small square of red damask.

Second New Hampshire Regiment

. . . (one of which is of light grey blue silk, the other being buff).¹⁰

There is also a separately printed supplement to the section "New York in the Revolution" from Davis' book, which was published by the state of New York in 1910. In it is reprinted a bill dated June 1776 for considerable quantities of yellow, blue, green, and pink silk used in making flags for regiments in the New York Line.¹¹

John H. Fow reports in *The True Story of the American Flag* that "On the 8th day of February, 1776, one of the committee on Naval affairs, Mr. Gadsden, who represented South Carolina in the General Congress, presented that body with a flag that was made of yellow silk with a rattlesnake upon it." Since silk was commonly used in making regimental and state banners, there appears to be no reason why the "stars and stripes flag," the

national emblem, might not also have been made of this fabric.

The silk flag known as the "Schuyler Flag," now displayed in the Army-Navy Museum at Independence National Historical Park in Philadelphia may represent an example of the silk presentation flag. It is a stitched silk flag with the eagle and thirteen stars painted on the blue canton. It has seven white stripes and six red ones. Although originally credited as a "Regimental Flag," Frank Earle Schermerhorn in his *American and French Flags of The Revolution* points out that "General Schuyler did not have troops under him during the latter part of the Revolutionary War, nor in fact after August 1777 . . . the canton of the flag could not, seemingly, have originated prior to 1782 . . . being perhaps a presentation flag . . ."

We see further use of this eagle-and-star canton in later flags. Rather than as an example of a regimental banner, this Schuyler flag may well represent one of the earliest national thirteen-star, thirteen-stripe flags in existence. The use of the eagle in the field design—discovered in contemporary paintings—was not uncommon; however, due to the difficulty of incorporating an eagle stitched into a bunting field of appliqued work, its use might be interpreted as having been limited to those where painting or embroidery would be suitable. This was not true. An example from the nineteenth century has a well-executed design of an eagle of cotton set into the bunting. (See "Twenty-nine-Star Flags" on page 35.)

In Spargo's account of *The Stars and Stripes in 1777*, he refers to the Fort Schuyler flag described by Colonel Willett in an original manuscript written in 1830:

The Fort had never been supplied with a Flag. The importance of having one on the arrival of the Enemy had set our Ingenuity to work, and a respectable one was formed. The white stripes were cut out of Ammunition Shirts the blue strips out of the Cloak Formerly mentioned taken from the Enemy at Peekskill [Described earlier in the account as "a blue Camblet Cloake here afterwards sewed to enable us to use it for the blue strips of a Flagg . . ."] The red stripes out of different pieces of Stuff collected from sundry persons. The Flagg was sufficiently large and a general Exhilaration of Spirits appeared on beholding it wave the morning after the arrival of the enemy.¹²

Although this description is not complete in every

detail, it offers considerable information. Noticeably lacking, however, is any mention of stars. This, then, was obviously the Grand Union flag with the field a combination of the crosses of St. George and St. Andrew, in place of the starry constellation. Verification of this is the John McGraw powder horn, showing a view of Fort Schuyler with a flag representing a version of the Grand Union design and dated December 25, 1777, which is pictured in the Quaipe book. The powder horn is in The New-York Historical Society's collection. The blue "strips" in Colonel Willett's account would adequately describe the triangular pieces of blue necessary to make up the field. The specific mention of fabric—white stripes cut from "Ammunition Shirts"—is quite interesting. An ammunition shirt was a military-issue shirt, usually of medium-weight linen. For the "blue strips" from a "blue Camblet Cloake," the blue used for a "cloake" would probably have been indigo, a very dark blue, while camblet at this time was a generic name for a variety of plain, woven, wool fabrics.

In the statement "red stripes out of different pieces of Stuff collected from sundry persons," the word "stuff" means fabrics. The fact that the word "different" is used would indicate that the fabrics were possibly of various weights, weaves, finishes, fiber content, and even of different shades of red. Thus, in this early account of the construction of an American flag, the use of a variety of fabrics is evident as is the clue that at this period a flag might be made out of anything at hand.

The use of wool or linen—as opposed to silk—for flags was neither new nor novel. British flags had been made of worsted for centuries. The immediate implication, in using the word worsted as opposed to wool, is that the long fibers and method of preparing the yarns for a worsted fabric permit the weaving of a lighter weight fabric that would unfurl in the breeze as contrasted to a banner which is hung vertically and does not need to be unfurled. Britain's long use of worsted is recorded in a fourteenth-century description of the materials used by the British to construct flags. The following are mentioned: "in addition to sendal, was worsted, sindon and cloth of Aylsham."¹³ In *The Draper's Dictionary*, "sendal" is defined under the later spelling of "cendal,"

which is described in Chaucer's words as "thyne . . . lyke sarcenett and of a raw kynde of sylke . . . but coarser and narrower than the sarcenett"; "sindon" is described as a fine linen.¹⁴ Interestingly, "roll worsted" in the fifteenth century was noted to be one-half-yard wide. This practice of weaving a light-weight worsted fabric in an eighteen-inch width persisted through the nineteenth century. All of the fabrics noted are specifically described as thin or light in weight.

The use of a light-weight worsted fabric for flags was well adapted to inclement weather on land and sea. The wool fibers were less affected by moist air and the worsted spinning permitted the weaving of a strong, but light, fabric. In *Observations on Wool and the Woollen Manufacture* published by a manufacturer of Northamptonshire in 1739,¹⁵ "bunting" is listed as one of the classes of fabrics made of combing wool, another name for a worsted spun yarn. In that report, it is specifically mentioned that "Bunting is a stuff of which the colours and signals of ships are usually made."¹⁶

Technical descriptions of bunting (also spelled "buntine") in the eighteenth century are meager. It was not a glamorous trade such as the weaving of patterned silks or the printing of cottons. There is a limited description in an 1826 English book on manufactures.¹⁷ Under the chapter title of "Buntine and Shrouds—Sudbury," is the comment: "Many a time is the loom employed on silks and satins, the delicate muslin or the warm broad cloth. Such manufactures will be esteemed, without doubt. There is one manufacture, however, not very splendid in itself, but important in its use; such as the buntine, woven at Sudbury; important because of it are formed the colours and flags which lead our troops to battle, or which electrify our jolly tars with enthusiasm. Buntine is a thin sort of woollen stuff, very pliable, though strong; it is wove in strips, blue, white, red, etc. which strips are afterwards strongly sewed together, into the form needed for the specific flag; their different shapes having decidedly different meanings."¹⁸ This description of the British bunting is important as this fabric was not manufactured in the United States until after the American Civil War in 1865. Except for inexpensive holiday or special-occasion decorations, wool bunting was the predominant fabric used for the United States

flag in the nineteenth century.

To date, the earliest specific documentation of the construction of an American flag found by this writer is from the early nineteenth century, and does not, unfortunately, mention the name of the basic fabric; however, because of the use of linen for the stars, it can safely be assumed that this flag was not made of silk. Linen would have been too heavy for stars on a silk flag. Quite likely, the flag was made of bunting. The only information available is in a receipt of payment to Ann Hoskin, a seamstress, from the United States Military Department, Philadelphia, dated 1801.

	Dollar	Cents
. . . making 1 American Ensign 3½ feet hoist by 6 feet fly containing 6 yards	1	—
¼ yd linnen for heading 12½ cents . . . ¼ D ^o for stars 12½ c		25
thread 5 cents and rope 3 cents		8
	Doll.	1 .33

The receipt further indicates that the "United States Arsenal July 17, 1801, received of Israel Whelan Esq. per Ann Hoskin's the above specified flag."¹⁹ A second notation of record from the same flag maker, although not dated, can be placed in the 1802-1812 period. In it, Mrs. Hoskin offers an interesting alternative:

One flag 6 yards hoist by 12 yards fly will consisting of 17 stripes take the following number of yards of 20 inch bunting, viz—Blue 40 yds Red 83 and white 76 total 199 yards or a flag of the same dimensions with 15 stripes will take of Blue 35 Red 76 and white 64 total 175 yards . . .

Because of the mention of seventeen stripes, it seems obvious that the flag was being constructed after Ohio, the seventeenth state, entered the Union, and before Louisiana became the eighteenth state in 1812. It is very interesting to note that Mrs. Hoskin offered the choice of fifteen stripes. Despite the second Flag Act of 1794, there apparently was a choice. In further describing the materials to be used, Ann Hoskin offered "Russia sheeting [a linen fabric] for Heading; . . . Linnen for stars . . . thread, binding, etc. . . ."²⁰

In searching for more specific information about the use of bunting in the making of flags in the early nineteenth century, two interesting 1803

references of the use of the seventeen-star, seventeen-stripe flag were found. The first letter is to the War Department from Fort Dearborn, dated December 20, 1803, delivered in person six days later by General William Irvine. It stated: "I have to request that you will have Five Flags of about 9 feet by 6 with the Eagle, 17 stars by 17 stripes made of buntin delivered to W. Brashing on his return to this place for the use of the Indian Dept." The second, in reference to the same matter, is signed by William Irvine, Indian Department, December 26, 1803, and addressed to Tench Coxe Esq., stated: "Be pleased to purchase on account of the Indian Department five flags Nine feet by six, with the Eagle, seventeen Stars & seventeen stripes made of bunting." This is the same use of the eagle with the stars and stripes as was noted in the Charles Willson Peale paintings and the Schuyler silk flag. In 1806, the estimated cost of flags was reported to Tench Coxe Esq. by a Mr. Young.²¹ The quotes are for three large flags of varying sizes, one as large as 30 feet by 90 feet; however, it was noted that "this size color was proposed for Fort Mifflin but it was concluded to be too large." Of interest is the mention of "broad bunting," but unfortunately, no width is recorded. From the yardage indicated, it certainly could not have been more than the 20 inches found in the earlier reference. This would indicate that buntings of more than one width were woven. The fabric "Ravens Duck" is listed and was probably used for the heading, because it was a heavy-duty, stout fabric. "Seventeen stripes" are also mentioned in figuring the amount of bunting required. Although there were no "official" changes in the flag from the second Flag Act of 1794 until the third Flag Act of 1818, obviously there were changes in the flag and at official levels. A seventeen-star flag was not the result of the patriotism of an isolated Ohio frontiersman, as one might have imagined. An order for "Seven Regimental Standards and an equal number of Regimental colors . . ." received by the secretary of war on May 8, 1808, provides a comparison of these seventeen-star flags with the national flag. The request specifies that "The Standards should have a deep blue field with a full spread eagle in the center surrounded by seventeen stars handsomely wrought in needlework with yellow silk for the artillery and white silk for the infantry, under the eagle should be the number of

the infantry . . ."²² There were no stripes specified in these regimental flags as had been requested for the flags ordered for the Indian Department in 1803.

Another request, this time for a "Garrison Flag, 30 by 40 feet, . . . for Fort Columbus," was sent to the Philadelphia Superintendent's Office in 1810. This specified that the fabric be "Bunting."²³

The most detailed information concerning the materials of a flag of this period accompanied a letter to the Commissary General of Purchases in Philadelphia. This came from the Major Inspector General's Office and is dated September 12, 1818.

Herewith enclosed you will receive a drawing of the *Standard* flag of the United States, approved by the President, for all Military Garrisons and Public Arsenals, not to exceed Forty feet fly and twenty feet hoist.

In addition to the drawing are the following list of specifications:²⁴

For a Garrison Flag of 40 feet by 20 feet, will be required

37 yards of blue bunting for the field 7
stripes wide & 15 feet long
55 yards of red bunting for the seven stripes
50 yards of white bunting for the six stripes
4 yards of cotton for stars
3 hanks of cotton thread
1½ yds, canvas for heading
22 feet of rope " "

Commissary Generals Office
Philadelphia August 19, 1818

The power loom for weaving plain cotton goods was successfully introduced into the United States from England by 1814. Until this mechanization took place, linen—either imported or domestic—for the stars was cheaper than cotton. By 1818, however, cotton was the cheaper and more logical fabric to use. Cotton was also lighter in weight, a major consideration for a flag that would furl in the breeze. The use of cotton thread is also of interest. This was a new commodity in the early nineteenth century and until the 1820s was always sold in hanks.²⁵ The types of thread available prior to the nineteenth century were linen and silk. The use of 22 feet of rope for the heading of a 20-foot hoist points out that there were no grommets, such as were commonly used on later flags. Unfortunately, there are no specific details about the type of bunting that was used; however, it was English—it had to be. As mentioned earlier,

no bunting was made in America at that time. There was very little, if any, worsted goods manufactured. British goods continued to be imported, because an act of 1844 required that all provisions and materials for the United States government had to be purchased from the lowest bidder. This did not encourage manufacturers in the United States to compete with their more experienced British counterparts.

Although domestic manufactures were privately encouraged, most people in the United States—like the government itself—continued to buy imported goods, especially if these were either better or cheaper or both. The manufacture of worsted fabric was well established in England. Although some woolen goods and worsted manufacture was carried on in the United States, bunting—a fabric of limited demand—was a highly specialized product, as was noted in the account of the weaving at Sudbury. It was cheaper to buy British bunting than to attempt to manufacture the limited quantities of the fabric needed in America. The patriotic fervor of the pre-Revolutionary days did not continue into the nineteenth century, especially in economic matters. Although there might be a tendency to credit patriotic feelings, profit may also have played a part in the origin of the first company to manufacture American bunting.

By law, it was the practice of the army and navy of the United States to purchase fabrics, as well as other materials and supplies, from the lowest bidder—regardless of country of manufacture. On March 3, 1865, Abraham Lincoln signed a bill that made it “lawful for the Secretary of War, the Secretary of the Treasury, to enter into contract for Bunting of American manufacture as their respective services require for a period not exceeding one year, and at a price not exceeding that at which an article of equal quality can be imported.”²⁶ One of the men responsible for this first “buy America” law was General Benjamin F. Butler. It is possible, and even probable, that his interest was primarily a patriotic one; however, he had bought both an interest in a water-power site on the upper falls on the Concord River in Lowell, Massachusetts, and some small manufacturing buildings. On December 1, 1865, Butler wrote to the Clerks of the House of Representatives and the Senate offering to furnish flags that had been

made from American bunting by the United States Bunting Company, a partnership which he had with D.W.C. Farrington.²⁷

At this time, two factors made it possible for this country to commence competing with the British in the manufacture of bunting. First, there were improvements in the combing machines which were used to prepare the long wool fibers for the worsted spinning; second, the condition of the tariff made it profitable to begin the manufacture of light-worsted fabric.²⁸ There was a tariff on the raw wool needed for the worsted goods which had to be imported; however, this tariff was not as high as that on finished goods.

As a result of the act that President Lincoln had signed in 1865, his secretary of the navy attempted to solicit the help of the secretary of war to consolidate their bunting needs into one contract. This consolidation made the order large enough to interest a manufacturer in the United States. The navy had been engaged in making their own flags for a number of years. As far back as 1835, and for many years after that, ensigns were made at the Norfolk, Virginia, navy yard. As described by Harrison the flags made at Norfolk always had “the canton rested on a red stripe,”²⁹ while in most flags it rests on a white stripe. Later, the Brooklyn navy yard was used to repair flags and, finally, it became the manufacturing site.³⁰ In his letter of May 10, 1865, the secretary of the navy stated that “this Department has made repeated efforts to procure the manufacture of good American bunting and has constantly met by the objection on the part of the manufacturers that the order for the bunting was not sufficiently large to justify the expense of importing a particular wool suited to this manufacture and of making the requisite changes in the machinery . . . Without this joint action [ordering on one contract] it is probable that the employment of American bunting in the manufacture of American ensigns, flags and penants, as contemplated by Congress, will be indefinitely postponed.” Apparently, Butler’s efforts to reach the government for purchases of the American bunting he was already manufacturing had not yet reached the navy. The War Department did not agree to the navy’s proposal. The following message, dated May 15, 1865, was returned to the secretary of the navy: “Judging from the number of flags on hand

and the probable falling off of the demand for them, the quantity of bunting that may be required for the Military Service will be comparatively small . . . " G.H. Thomas who wrote this directive also made the point that "the law does not appear to require the purchase of American bunting . . . For the present . . . no contract [will] be entered into on the part of the War Dept."³¹

The navy, however, began to use the American bunting within a year. By 1867, the military was also using it. Several letters relating to the initial purchases of bunting for the military are in the files of the Quartermaster General's Office and provide interesting details concerning the fabric and the fabric changes that occurred during the next few years. The bunting manufacturers, Farrington or Butler, or both, must have approached the War Department, as the quartermaster general wrote to the secretary of war on April 17, 1867, requesting his decision about the purchase of bunting under the 1865 act. The quartermaster general mentioned "Parties representing the American Bunting Co. [this is the United States Bunting Company] call attention to this act . . . upon investigation it is found that the American bunting is a good article, Gen'l Crosman reports it to be stronger than the English bunting and in an experiment made by the Navy Dept., it was found that the flag made of American bunting was the most durable." Several copies of the printed navy report on this flag test are on file.³² On the back of one copy is an inked notation:

Hon. Benj. F. Butler
Presents copy of Official Report made by
Navy, merits of Bunting by U.S. Bunting
with a statement of Army Flags and samples
of Bunting
1 encl. & 1 roll of samples
Rec'd April 23/'67

A second note, in different ink, says:

Part of the samples ref. to Gen'l G.H. Crosman
Q.M. Gen'l May 6/67

In the same ink as the second notation is written:

Q18 B91 Rm 20
Rm 20

A handwritten listing of the costs of army flags appears on a folded sheet of paper with the relative costs of bunting on the overleaf. The sheet of paper bears the same file number as the note

above and must be Butler's statement, although the list is not signed or dated. It reads:

Cost of Army Flags		
<i>Garrison</i> 36 x 20 ft.		
160 yds 18 inch	bunting 40 cts.	\$64.00
Cost making and	trimming	<u>12.00</u>
		\$76.00
Price paid by War		
Dept. Jan 1865		\$125.00
<i>Storm</i> 20 x 10 ft.		
50 yds 18 inch	bunting 40 cts	20.00
Cost making and	Trimming	<u>6.00</u>
		26.00
Price paid by War		
Dept. Jan 1865		\$36.50
<i>Recruiting</i> 9 ft. 9" x		
4 ft. 4"		
11 yds 18 inch	bunting 40 cts.	4.40
cost of making	and trimming	<u>2.60</u>
		\$7.00
Price paid by War		
Dept. Jan 1865		\$10.00

On the overleaf is found:

The cost of English Bunting according to prices furnished me by Mr. Winter, in Bradford, England, imported under the present tariff will be as follows, reckoning exchange 145 and Gold at 135 viz:

Low grade single warp 15 shillings	\$13.16
Good article double warp 24 shillings	17.00

We have thought best to put our prices at present as follows viz:

"Standard" quality Double Warps (samples here-
with)

By the case	smaller	quantity
48 pcs.	½ case	
\$14.00	\$15.00	\$16.50
Eagle Quality Single Warps		
\$12.00	\$13.00	\$14.50

This information is quite valuable.³³ It is documentary evidence that the English manufactured both single-warp bunting and double-warp bunting. It also shows that the United States Bunting Company manufactured both; however, the "Standard" quality of double-warp bunting manufactured by the United States Bunting Company was not the one sold to the government, as will be seen later. It will also be noted in reading the technical analysis made of the bunting samples included in the National Archives file that only the English single-warp bunting (so called "Low Grade" by Butler) seems to have been tested and.

indeed, seems to be the only type ever bought by the United States from the British.³⁴ The purchase of single-warp English bunting may have been due to the lowest bidder principle of purchasing. In competition, however, the company in the United States was able to furnish their best quality, double-warp bunting at a price below that of the double-warp English, and is reported in the correspondence that ensued. The first letter, from Brigadier General Alexander J. Perry of the quartermaster station in New York, to Major General Daniel H. Rucker, acting quartermaster general, is dated May 4, 1867.

I have been to Philadelphia and New York and have examined several samples of English bunting and the standard samples of such as has been used in making Army flags—

I have found that none of equal quality to that offered by the American bunting company would be imported at a less rate than the piece at which they proposed to furnish theirs. I invited the Office of Messrs. Naylor & Co., a large importing house, whose offer submitted some two weeks since to import at \$11.00 and \$12.00 per bolt, I ascertained was made upon a gold basis. The price would on National currency be equivalent to \$16.26 for bunting of quality not superior to the American.

In view of these facts I recommend that Gen'l G.H. Crosman, that Q.M. General in charge of the clothing Depot in Philadelphia be authorized to contract with the American Bunting Co. [again the United States Bunting Company is the one he meant] for the delivery of a sufficient quantity of their bunting for one year's supply to be equal in all respects to the samples submitted by their agent, and at a rate not to exceed \$14.00 per bolt, as proposed on their tariff of prices herewith enclosed.

The number of flags to be provided is as follows:

Three hundred (300) Garrison flags

Six hundred (600) Storm flags

No recruiting or other flags will be wanted for the coming year, as the supply on hand is sufficient to meet all probable demands that will be made upon the department.

I recommend that the flags be manufactured, as before the war, at the Sckuylkill [sic] Arsenal.

Enclosed herewith will be found the several lists of the pieces at which the several parties named have proposed to deliver, or at which it was ascertained English bunting could be procured, also the tariff of the American Bunting Co. [again, he means the United States Bunting Company].

Crosman wrote to the United States Bunting Company about this for, on May 27, 1867, D.W.C. Farrington answered:

In answer to your favor of the 15 inst. . . the United States Bunting Co. will furnish the Q.M. dept. 845 pieces Scarlet, 750 pieces white & 355 pieces of Blue of the "Navy" quality at the rate of sixteen (16.00) dollars per piece. Of the "Standard" quality at the rate of fourteen dollars (14.00) per piece. The quality to be equal to the sample sent herewith, averaging 40 yards in length and 18 inches in width, being the same price paid by the Navy Dept. during the past year.

The Shade of color can be changed to suit the requirements of the Dept. The colors of the sample are those adopted by other Departments of the Government and we adhere to them as nearly as possible.

We prefer to deliver about 300 pieces per month commencing June 1 or July 1 but if required could deliver 400 pieces per month.

Our bunting is all made from the long Canada wool and we beg leave to call your attention to the superior selvage and brilliant colors of the goods.

Our "Navy" goods are selected pcs. from selected stock and any pieces having the smallest imperfection are put into the next lower grade. Our business being substantially confined to Government we intend by the manufacture of a superior fabric of uniform quality to merit and receive it patronage.

Crosman then wrote to Neal Campbell, the chief inspector in Philadelphia, and sent the samples of the bunting he had received from Farrington. Campbell replied on May 25, 1867.

I have examined several pieces of bunting sent to you by the U.S. Bunting Manufacturing Co. and have the honor to report that the three pieces marked "Navy" are the best quality and are precisely the same quality of bunting as General Perry sent to your office from Washington. The pieces marked "Standard" are inferior and will not compare with the samples sent by General Perry. Although they are less in price, by two dollars per piece, in my opinion that marked "Navy" will be the cheapest, as it will give more wear than the "Standard."

P.S. Enclosed are samples of each.

Crosman referred the matter to Brigadier General D.H. Rucker, who wrote to the United States Bunting Company. Farrington answered from Lowell on June 1, 1867, giving a further explanation of the types of bunting which were being made by his company.

Your letter of May 28th is received and content noted. As an explanation of the apparent change in prices referred to therein we have the honor to say that the United States Bunting Company manufacture three grades of Bunting to which we apply the brands of "Navy" "Standard" and "Eagle." The Navy

brand (which we propose to change to Army & Navy) is manufactured from selected wool and great care is used in coloring and finishing to insure the production of uniform and durable goods. Any pieces failing in any respect is put into the next lower grade. This brand we sell only to the Government. The "Standard" brand is the next lower grade and is intended for the general market and although a good quality is not equal to the "Army & Navy" brand. The "Eagle" is a still lower grade and is intended for interior decorations. Our prices for the several brands are as follows:

"Army & Navy"	per pc. of 40 yds.	\$16.00
"Standard"	per pc. of 40 yds.	14.00
"Eagle"	per pc. of 40 yds.	12.00

The samples of Bunting submitted to the Quartermasters Dept. on the 23rd of April by General Butler were of the best quality viz. the "Army & Navy" brand and as we had never made any sales of this brand except to the Government the Clerk gave only the pieces of the "Standard" and "Eagle" qualities.

Sixteen dollars per piece is the lowest price at which we have furnished any bunting to the Government—the Navy Dept. having paid us that price for a large quantity and as that is lower than as good a quality of English Bunting can be furnished we hope—the Dept. will according to the Act of Congress be justified in giving preference to that of American manufacture.³⁵

The mistake of furnishing samples of the top-quality bunting and quoting the prices of the middle and low grade may have been an honest one, as explained by Farrington. It does seem

strange, however, that the Eagle-quality bunting was quoted and no samples of it seem to have been submitted. At least none are mentioned, and none have survived with the other quartermaster records.

There are five groups of bunting samples in the files at the National Archives. They are marked as follows:

1. English Bunting from U.S. Navy Yard Washington. [Two samples of this, one of red and one of white.]
2. "Navy" Bunting received from United States Bunting Company, Lowell, Massachusetts. [Tagged with a red wax seal. There are three samples, red, white, and blue.]
3. "Standard" Bunting received from United States Bunting Company, Lowell, Massachusetts. [Tagged with a red wax seal. There are two samples, red and white.]
4. Samples of Bunting received from Quartermaster General's Office May 8, 1967. [Tagged with a red wax seal. There are three samples, red, white, and blue.]

In the fifth group are three pieces of bunting, red, white, and blue, with no information. A small paper tag reads "B 91 Rm 20." This is the same notation as is on the copy of the official navy report on the flag study along with the note that samples of bunting were received from Benjamin Butler, April 23, 1867.

The samples of bunting were analyzed as follows:

1. English

Red	1 2½ inches, selvedge to selvedge Single-ply, Z-twist warp Single-ply, Z-twist weft (not as tightly twisted as warp) Thread count (from average of three) 31 (warp) x 29 (weft) Six pairs of warps make up one selvedge, seven pairs make up the other Very well dyed, no evidence of white fibers
White	12 inches, selvedge to selvedge Single-ply, Z-twist warp Single-ply, Z-twist weft (not as tightly twisted as warp) Thread count 34 x 28 Five pairs of warps make up one selvedge, six pairs make up the other.

This English bunting is made of very long wool fibers; the yarns are fine, but strong and wiry. Some loose, long fibers are found at the selvedges, which are not compact.

2. "Navy"

Red	1 8¼ inches, selvedge to selvedge 2-ply, S-twist warp Single-ply, Z-twist weft Thread count 32 x 32 Seven pairs of warps make up each selvedge Evidence of piece dyeing, some white fibers show in selvedge
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- | | |
|-------|--|
| White | 18¼ inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist filling
Thread count 32 x 31
Seven pairs of warps make up each selvedge |
| Blue | 18¼ inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist weft
Thread count 32 x 31
Very well dyed, no evidence of white fibers. |

The "Navy" bunting has a very firm selvedge. The fabric is not as light, crisp, and wiry as the English.

- | | |
|-------------------|---|
| 3. "Standard" Red | 18¼ inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist weft
Thread count 31 x 30
Seven pairs of warps make up each selvedge
Evidence of piece dyeing, more white fibers than in "Navy" red |
| White | 18¼ inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist weft
Thread count 31 x 30
Six pairs of warps in each selvedge. |

The "Standard" bunting looks spongier than that of the "Navy." There is slight difference in the thread count, but the primary difference is in the yarns. The yarns are softer, spun from shorter wool, that give the bunting an opaque look. It is not as crisp as the "Navy."

- | | | |
|-----------------------|-------|---|
| 4. Samples of bunting | Red | 17 3/8 inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist weft
Thread count 33 x 31
Seven pairs of warps make up each selvedge
Evidence of piece dyeing, some white fibers in selvedge |
| | White | 18 7/8 inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist weft
Thread count 32 x 31, seven pairs of warps make up each selvedge |
| | Blue | 18¼ inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist weft
Thread count 32 x 31
Seven pairs of warps make up each selvedge
Very well dyed, no evidence of white fibers. |

Although there is some variation in width, these samples appear to be the "Navy" quality bunting.

- | | | |
|--|-------|---|
| 5. Samples of bunting, probably received from General Butler | Red | 17½ inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist weft
Thread count 33 x 30
Seven pairs of warps make up each selvedge
Evidence of piece dyeing, some white fibers in selvedge. |
| | White | 18¼ inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist weft
Thread count 31 x 31
Seven pairs of warps make up each selvedge |
| | Blue | 18 3/8 inches, selvedge to selvedge
2-ply, S-twist warp
Single-ply, Z-twist weft
Thread count 32 x 31
Very well dyed, no evidence of white fibers. |

Although there is a slight variation in width and thread count, the fifth group of samples appears to be the United States bunting "Navy" quality. There is no reason to doubt that these are the samples submitted to the Quartermaster Department on April 23, 1867.³⁶

While the United States Bunting Company was not the only American manufacturer that ever supplied bunting to the United States government, they apparently produced the best and furnished most of the government's need. In a letter from George Sparrow to General Perry on March 2, 1867, Mr. Sparrow referred to the fact that he had supplied American bunting to the government earlier under the name of W. Wilson³⁷ and wished to furnish the same again. A notation on the back of the letter states that the earlier contract with W. Wilson was not satisfactorily filled, and that there was little reason to believe that Sparrow could furnish as good a bunting as the Lowell Company. It would be interesting to compare samples of this bunting with that of United States Bunting Company, but none of the W. Wilson samples were kept in the file.

Muslin continued to be used for the stars. A letter of February 5, 1867, ordering supplies for the construction of flags specifically states that "bleached muslin will be necessary for the purpose of making the stars." This was to change very soon; at least, for some of the official flags. Before describing the new process of manufacturing flags, introduced in 1869, it might be enlightening to quote the cost of manufacturing the two large types of military flags—the Garrison Flag and the Storm Flag. Fortunately, the following itemized materials used and their costs are available in a letter to the Schuylkill Arsenal dated February 8, 1869.

Production Costs			
<i>Garrison Flag</i>		<i>Storm Flag</i>	
150 yd. Bunting	\$51.66	44 yd.	\$14.30
6 yd. Bleached Muslin	.96	3 "	.48
1 yd. Duck	.40	½ "	.20
20 yd. Bolt Rope	.20	10 "	.10
5 Spool Cotton	.25	2½ "	.12
2 Flag Thimbles	.05	2	.05
Cutting and Making	7.25	---	4.12
	\$60.77		\$19.37

There are several items in this list which are of special interest. First, it shows that duck instead of

canvas was being used for the heading—duck was a cotton fabric at this time. These materials agree with the ones used in the military flags of known origin and date that have been checked. The term "spool cotton" refers to cotton thread on a spool and probably was of the type described as 3/2 ply (three 2-ply yarns twisted together, a cabled construction.)³⁸ The third item of note is the "flag thimbles." This would mean that part, or all, of the flag was stitched by hand. Although sewing machines were used by the Quartermaster Depot in Philadelphia as early as 1851,³⁹ they obviously were not used to do all the stitching for flags—even as late as 1869.

In addition to manufacturing bunting, the United States Bunting Company proposed to manufacture the flags. Farrington wrote to the quartermaster general, Montgomery Meigs, about this idea in January 1869. Meigs, in turn, wrote to the secretary of war on February 26, 1869, about Farrington's proposal and describes the flags as follows:

Each flag to be made up complete of the American Bunting; the Stars being left white in the process of dyeing the bunting for the field; not made as has heretofore been usual by sewing pieces of white cotton cloth. This mode of making the stars has great advantage and as it is patented⁴⁰ there can be no competition secured in its use by advertisement [for bids].

The military decided to go ahead with this new type of flag. Neal Campbell, the inspector, wrote to General Perry on March 25, 1869, about the specifications for the Garrison and Storm flags.

The size of Garrison Flag, 36 feet, clear of heading and 20 feet wide or the width that 13 stripes of bunting 18 to 19 inches wide, 37 stars on both sides of field . . . the heading to be of 8 oz cotton duck, the heading rope to be like sample enclosed [heavy flat braided hemp rope of 2-ply coarse strand] . . . also two corner pieces at the head of flag . . . the heading to be 2½ inches wide when on flag.

In further developing his new system of manufacturing flags, Farrington wrote in April to Meigs about another improvement in the Storm flags.

. . . The specifications are the same for the regulation Flags with the exception that the stars are printed [actually resist dyed] on the bunting in the process of dyeing and on the storm flag the stripes are also printed in the same manner thus avoiding the necessity of splitting the 18-inch bunting.⁴¹

But the United States Bunting Company did not stop there. It was almost as if they had become obsessed with developing ways by which the manufacture of the flag could be improved. By June 1869, Farrington had other ideas. He wrote the following to General Perry:

Your letter of the 8th is received. I propose to make the Union of the Garrison Flag of 25-inch Bunting so that five widths of it will equal the seven widths [18-inch bunting] to which it is attached.

I propose also to use for the union of the Storm flag two widths of the 25-inch and one width of 12½-inch Bunting if practical otherwise I shall use all 12½-inch.

Despite all of Farrington's efforts, 1870 was not a good year. When he tried to sell more flags to the quartermaster in Washington, D.C., he was told that they had a year's supply. Farrington's efficiency during the previous year before was working against him. Even his threats that combing wool was getting scarce, his promises that "I am also erecting exciting new and improved machinery by which I shall be able to produce flags of superior quality," and his offer "to discount \$1.00 per flag" did not change General Perry's mind. In view of the supply the Quartermaster Depot had on hand, they were definitely not going to order any more flags at that time.

Nevertheless, the United States Bunting Company was well established by the 1870s. They were prominently mentioned both by John L. Hayes in his report *Wool and Silk Fabrics* at the Philadelphia Centennial in 1876 and in the specific-item list:

Before the late war (1861-1865), English bunting, made like lastings of long-combing wools, formed the sole material for our national flags. The United States Bunting Company, of Lowell, first successfully achieved the manufacture of bunting. Its exhibits at Philadelphia showed not only excellent fabrics in bunting and moreens, but a marked improvement in the construction of the national flags.⁴²

400. United States Bunting Co., Lowell, Mass., U.S. Woolen Bunting, Moreens and Damasks Report. Commended for an excellent show of bunting made of English and Canadian wool, and for originality of process of striping and forming design and pattern. . . .⁴³

The new process for making flags that Farrington had introduced to the government and

which was lauded at the centennial exhibition in Philadelphia became known as "clamp dyeing."⁴⁴

This process did eliminate the need of stitching the stars into position, and on the smaller flags it eliminated the sewing of the stripes; however, the increased efficiency of the sewing machine and the many specialized attachments invented to further improve its usefulness counterbalanced the time saved in clamp dyeing over hand sewing. The perfection of the zigzag attachment replaced hand stitching the stars into position. By 1894, Cole's *Dictionary of Dry Goods* reports that "as it is both tedious and expensive, clamp-dyed bunting plays only a small part in flag making."

It would not be impossible, therefore, to find thirteen-star flags of the centennial period that were manufactured by the clamp-dyeing method; however, they would not be common. Clamp-dyeing was expensive and, for the most part, the thirteen-star flags were commemorative and decorative. Only the navy small-boat flags would have been "official" in any sense of the meaning of the word.

As has been noted, bunting was not the only fabric used in the construction of the flag. Except for the clamp-dyed flags, the stars were always of a fabric other than bunting. Although linen was used on the eighteenth-century flags, by the second decade of the nineteenth century the stars of a standard bunting flag were always cut from muslin. The heading changed too, from heavy linen to cotton duck. There is no real cut-off date that can be observed because linen headings continued to be used on flags of the late-nineteenth century. In dating, all the components of a flag must be constantly weighed with and against each other.

This same precaution concerning the time limitation must be used in dating the type of grommet used in the heading. Hand-worked grommets or rope support were used, as would be expected, in the early part of the nineteenth century; however, they too continued to be used long after metal grommets had been introduced. Metal grommets were used in navy flags of the Civil War period. These may have been used even earlier as there are five patents recorded for metal grommets between 1848 and 1869.⁴⁵ Whether the earlier ones were confined only to their use on ship sails has not been established; however, there

is a record of a documented ship flag,⁴⁶ used in an 1864-1869 expedition, which was equipped with metal grommets. Metal grommets are commonly found on flags of the 1870s⁴⁷ and, sometimes, these even bear a patent date. Care must be used in dating by patent—it only limits the date in one direction, no earlier than the date of the patent.

Various references have been made to the thread used in making the flags. This item can be of great assistance in determining some further limitations of the date of a thirteen-star flag. Both the thread and the stitching are clues. Since the method of stitching is the more obvious, this will be considered first. Basically, the flag is either stitched by hand or by machine, or a combination of both. If any part of it is stitched by machine—original construction and not later repairs—this would place the date of manufacture after 1850. Although some sewing machines were patented in the 1840s and a few offered for sale by 1849, the type of continuous feed needed to make it practical to stitch even the stripes of the flag by machine was not available until the early 1850s.⁴⁸ The variety of stitches that could be made by various sewing machines can also be helpful in dating. Since this variety was developed within a few years, this information can only be used with a full understanding of the capabilities of the machine and the commercial use of the particular invention.⁴⁹ For example, although a chainstitch machine was manufactured in France in 1830 and one was patented and marketed in the United States in 1849, there was no practical chainstitch machine available in this country before the late 1850s. There is no evidence that the French machine appeared in this country in the earlier years, and the 1849 chainstitch machine patented in this country was incapable of stitching the flat-fell seams of a flag. As it happens, one rarely finds a flag constructed on a chainstitch machine. All the ones that are seem to have been made in this century.

It is interesting that the original purpose of a sewing-machine stitch has changed with time—from *decorative* to *utilitarian* to *decorative*. For example, if one looks for the earlier use of the zigzag stitch, evidence that this stitch was in use as early as the 1850s can be found; however, at this time the stitch was limited to decorative purposes. In flag manufacture, the zigzag stitch was used to

appliqué the cotton star to the bunting field. Sometimes, the star from both sides was stitched in one operation. This change in manufacturing technique cannot be dated before the turn of the century, which was the forty-five-star flag period. The zigzag machine for factory use and machine trimmers, which would be necessary to trim the muslin stars, both date from the mid-1880s, but these do not seem to have been applied to flag manufacture that early. A flag must always be examined carefully for details of manufacture before a final dating judgment can be made. Flags that use a combination of hand and machine stitching must be judged for dating by the limitations of the latest type of machine stitching.

The handstitched flags provide the most difficult dating problem. The characteristics of hand stitching are individual and need not vary from one period to another. The type of thread used to make the hand stitches offers more information than the stitches themselves. As in judging fabric components of a flag, one item alone does not establish a date, but when a specific item is introduced at a given time, again it allows a date limit in one direction. There are a few milestones in the manufacture of sewing thread that are important to keep in mind.

In the eighteenth century and earlier, there were two types of thread in common use, silk thread and linen thread. These were usually 2-ply. There are exceptions, and examples can be found of articles stitched with yarns manufactured for the warp of a woven fabric. This is sometimes true in the seams of coverlets, where even wool was used as a sewing thread. Wool was also used to sew bunting, but this was an exception. Cotton was spun and used as a weft in fabrics of the Revolutionary War period, but it was not strong enough to be used as the warp and certainly not strong enough to be used in sewing. Again, fine-spun India cotton might have been plied for sewing, but we have no record that it was manufactured for this purpose. After cotton was spun by machine, and fine, strong yarns could be spun for the warps of fabrics, one might expect that cotton sewing thread was soon manufactured—it was not. In America, the wife of Samuel Slater, the man who introduced the Arkwright system of spinning cotton by machine, is frequently credited with making the first cotton sewing thread from

warp yarns spun at Pawtucket, Rhode Island, about 1794. If she did, it was only for her use, as sewing thread did not become a manufactured item of Almy and Brown, partners and distributors for Slater, until early in the nineteenth century.⁵⁰

As a matter of interest, the general manufacture of cotton thread as an industry originated in Scotland. Early in the nineteenth century, Napoleon's blockade curtailed the British importation of silk. This importation was needed not only to weave fabrics, but also for making the string heddles for looms. James and Patrick Clark, manufacturers of these heddles in Paisley, Scotland, attempted to substitute cotton—then being spun by machine—when they were unable to get silk. When they were successful, they decided to try using cotton to manufacture sewing thread—the result is history. The manufacture of thread had been an industry in Paisley for many years. As were the earlier types of thread, cotton thread was sold in hanks until 1820 when the manufacturers began to wind it onto small wooden spools for which they charged an extra halfpenny. The charge was refunded when the empty spool was returned. The popular cotton thread of this period was the 3-ply variety; however, both 2-ply and 4-ply cotton threads were also made.⁵¹ The increase in the number of ply made the yarn more cylindrical. A few years after the Clark company began to manufacture cotton thread another Paisley family became interested in producing the same product. James Coats came from a family of Paisley weavers and gained his knowledge of the twisting of yarn from the manufacture of crepe shawls. He began to make Coats' thread at Ferguslie, Scotland, in 1826. Upon his retirement, his two sons, James and Peter, took over the business and established the firm of J. and P. Coats. Their thread was first imported into the United States about 1840. The earliest record of a 6-ply variety was also in 1840.⁵² This type, manufactured by C.E. Bennett of Portsmouth, New Hampshire, received a gold medal at the Fair of the American Institute in 1850.⁵³

The cotton thread, and the silk and linen thread still being manufactured, was quite good when

used by a hand sewer, but the minor imperfections caused havoc in the sewing machine, which was just coming into use at this time. Inexpensive types of silk thread were weak and frequently broke due to abrasion at the eye of the needle. Most of the linen thread was too coarse to use in the sewing machine. Finer quality linen and silk machine twist were manufactured, but they were very expensive. Considering the quantity of thread that the sewing machine used—two to four times as much as sewing by hand—a new type of inexpensive thread was needed. The obvious answer was in the improvement of cotton thread.

The continuing demand for good cotton thread brought George A. Clark and William Clark (descendants of the earlier Scottish manufacturers) to Newark, New Jersey, where the third generation of thread manufacturers built a large mill in 1866. The needs of the sewing machine were met when George Clark decided that a new construction and softer finish were needed in the cotton thread. He produced a cabled thread made up of three 2-ply yarns twisted together. The thread was called Clark's "Our New Thread," which was later simply referred to as "O.N.T." The construction was adopted by other thread manufacturers and 6-cord machine thread became a standard cotton variety.

The importance of this information is that any thirteen-star flag stitched with this type of 6-ply, cabled cotton thread cannot be dated before the 1860s. It does not mean, however, that a thirteen-star flag stitched with thread of fewer ply could not have been made after this date, as the earlier types of thread continued to be manufactured and still are.

Thus, with this information, the design, the fabrics, the thread, the construction, how can a thirteen-star flag of unknown origin be identified? First, there are a number of specific identifications for the various periods. With these, the check chart, careful observation, and some examination equipment, it should be possible to limit the date of any thirteen-star flag. It should be remembered, however, that it is not always possible to give a specific date, even within a quarter of a century.⁵⁴

Documented Flags: Technical Examination and Description

The best way to learn to recognize the slight differences in the wool buntings and other flag characteristics is to examine as many flags as possible. The flags that will be of most help are the contemporary ones of known date. Unfortunately, there are very few eighteenth-century flags that fit this criteria. For this reason, the later flags—those with more than thirteen stars—offer the best help for comparative study. There would be little reason, for example, for anyone to have manufactured a twenty-four-star flag in 1876. Therefore, studying such a flag helps one to learn the characteristics of any thirteen-star flag that might have been made during the twenty-four-star period of 1822-1836. The later manufacture of thirteen-star flags was not, as a rule, an attempt at fraud or deception; therefore, the same fabrics and methods would be used to manufacture a thirteen-star flag as the contemporary flag of the same period.

For this study, concern will be with the characteristics of flags through the third quarter of the nineteenth century, the centennial period. Although an example of each of the flag changes of the nineteenth century was not available for this study, enough flags were examined to make the needed comparisons. There were nineteen official flag styles from the first Flag Act of 1777 until the period of the centennial; the nineteenth having been adopted in 1867 and lasting until the thirty-eighth state—Colorado—was admitted to the Union on August 1, 1876, and a new thirty-eight-star flag was adopted in July 1877.

Thirteen-Star Flags

Of the thirteen-star flags in private and public collections that are heralded as Revolutionary War

or eighteenth-century examples of thirteen-stars flags, the following have been examined: Guilford Battle Flag, State Department of Archives and History, Raleigh, North Carolina; Flag of Cowpens, Maryland State House, Annapolis, Maryland; Bennington Battle Flag, Bennington Historical Museum, Bennington, Vermont; and the Navy Ensign of 1780 (date question), Germantown Historical Society, Philadelphia, Pennsylvania. Most of these rely heavily on family history for their documentation. Family history *can* be very interesting and reliable sometimes, and sometimes not.

GUILFORD BATTLE FLAG (Figure 10). This thirteen-star flag in a 4-3-4 design with two stars offset at the right of the field—making an almost 5-3-5 arrangement—is quite unique in many respects. Its history was recorded in 1909 as follows:

It is there stated that the flag was brought back from 'the battlefields of North and South Carolina about the close of the War of the Revolution.' It was in the possession of one Micajah Bullock of Granville County, and remained in his possession, according to family tradition, until 1854. In that year it was carried by a son of Micajah, one Edward Bullock, who the record states was then 81, and by him presented to Mt. Energy Lodge, and then deposited in the lodge hall where it remained until 1904. In the latter year Mt. Energy Lodge was moved to Creedmore, (and presumably the flag was carried with other lodge property) and in 1909 it was presented to the North Carolina Grand Lodge by the eldest male descendents of Micajah Bullock.⁵⁵

In 1914 the flag was presented to the North Carolina Museum of History by the Grand Lodge of Masons of North Carolina.⁵⁶ The year 1854 is the earliest that this flag can be documented.

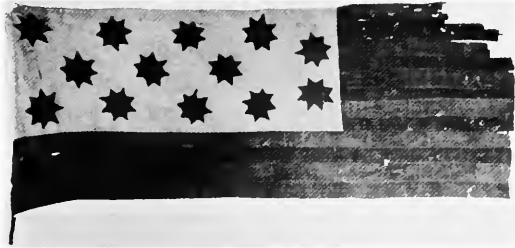


Figure 10. The “Guilford Courthouse Battle” Flag, exhibited in the Museum of History, State Department of Archives and History, Raleigh, North Carolina. Eight-pointed stars are the earliest type used in the 1779 drawings of the flags of the United States. Stars with this number of points were the type used in woven and other textile work; they were the easiest to plan and execute. Although this flag probably does not date from the Revolutionary War period, it may date from the last few years of the eighteenth century and represents the oldest surviving example of the use of the eight-pointed star in an American flag. (Courtesy of the North Carolina State Department of Archives and History.)

Information can be gained from a technical examination.

Size: There is an 8½-foot fly (incomplete) by 3½-foot hoist (incomplete). The union is unusually long and narrow, 6½ feet by 2 feet, 1 inch.

Fabric: The union is a white cotton field. Blue,

cotton, eight-pointed stars are set into the field, with the stars being about 8 inches in diameter. There are six complete or fairly complete blue cotton stripes, and six complete or fairly complete red worsted stripes (a small-warp patterned fabric). Although this flag is usually illustrated as having thirteen stripes, there is positive evidence of two more stripes stitched to the bottom, staff side of the flag. This would mean an original total of fourteen stripes or more. The fragments are in the original fabric and stitching. It appears that the missing part may have been removed deliberately for the edge is too even to have been caused by wear or torn accidentally. There is no record as to when, why, or by whom the stripes were removed; it was done before 1914 when the flag was received.^{5 7}

Heading: There is none. The edges are all cut on the staff side. There is evidence that in its present size, the flag had been nailed to a staff.

Sewing thread: This is 2-ply linen.

Stitching: This is by hand, with flat-fell seams for the stripes and main part of the flag.

Grommets: There are none.

Date: Since this flag positively had more than thirteen stripes and possibly more than thirteen stars at the time of its origin, it was made after 1791. It is this writer’s conjecture that it may have been a fifteen-star, fifteen-stripe flag possibly made as early as the 1795-1800 period (Figure 11). The technical identifications verify that it could have

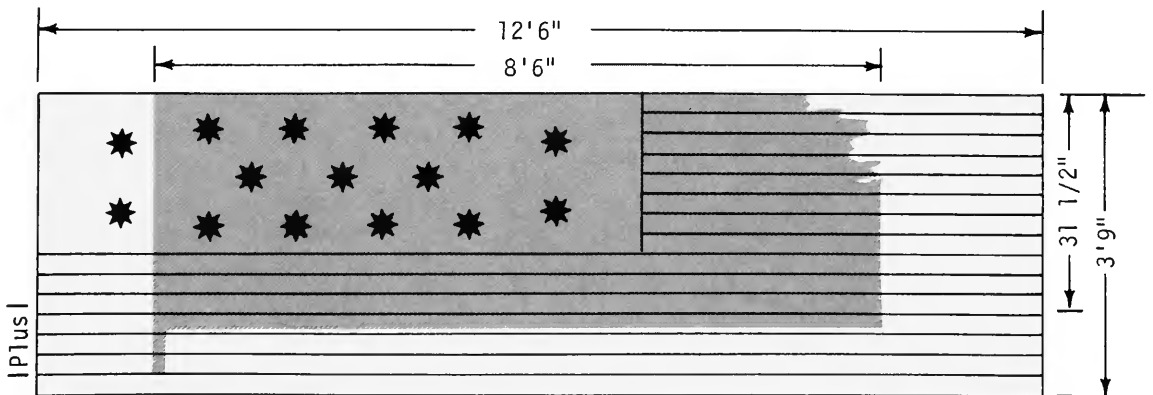


Figure 11. Conjecture of author’s suggested original design and size of the Guilford flag. The portion of the flag as it exists today is indicated. The flag, if completed as suggested, would measure approximately 12 feet 6 inches by 3 feet 9 inches. With or without the suggested additions, the proportions are very long and narrow by modern standards.

been made during that period. It may have been carried during the War of 1812. If it was, it would have been old by 1854 and if Micajah Bullock was 81, an understandable confusion of history could have resulted.

FLAG OF COWPENS. This thirteen-star flag, twelve in a circle with one in the center, was reportedly

carried by Color Sergeant William Batchelor of the Maryland Light Infantry, . . . at the battle of Cowpens, S.C., January 17, 1781. Wounded in the engagement, Batchelor returned with the flag to his Baltimore home; and in the War of 1812 his son, Ensign Joshua F. Batchelor of the 27th Maryland Militia, carried it in the North Point phase of the Battle of Baltimore, September 12, 1814. For years, the younger Batchelor carried the flag on commemorative occasions; but in August, 1843, he deposited it with the Old Defenders' association, a veterans organization formed shortly after the successful defense of Baltimore. On moving to New Jersey, however, he reclaimed the flag and kept it until his death in Newark about 1855. Years later it was returned to Dr. Albert Kimberly Hadel of Baltimore, a member of the Old Defenders group and an officer in its successor organization, the Society of the War of 1812. On October 19, 1907, that group presented it to the State.⁵⁸

The earliest date of record for this flag is 1843. A technical examination provided the following information:

Size: It is approximately 30 inches by 61 inches (width and length vary from one area to another).

Fabric: The union is a blue bunting field of single-ply worsted yarns. Cotton, five-pointed stars are appliquéd to both sides of the flag, twelve in a circle, one in the center. There are thirteen bunting stripes, seven red and six white of single-ply worsted yarns.

Heading: There is none; however, a rope support with loops at top and bottom are whipped into a bunting hem in place of a heading.

Sewing thread: The 2-ply linen thread was used to stitch bunting. Plied cotton thread was used to stitch stars, and although the number of ply cannot be determined, it is not a cabled thread.

Stitching: It is by hand and with flat-fell seams.

Grommets: There are none.

Date: The cotton stars and the cotton thread used to stitch the stars would date this flag from

the nineteenth century rather than the Revolutionary War. There is no reason to doubt that it was in existence in 1843. The flag is very similar to one in the collection of the Division of Military History in the Smithsonian Institution's National Museum of History and Technology, which dates from the period of the Mexican War and is described with the twenty-nine star flags—the period in which it was made (Figure 12).

The Smithsonian Institution received two requests for the dating of other flags with twelve stars in a circle and the thirteenth in the center. One, in a private collection in Indiana, was not submitted for examination. The other is described as a hand-stitched thirteen-star flag ("A-12" on page 47). It should be noted for comparison.

The Flag of Cowpens, originally deposited with the Old Defender's Association in 1843, may have been a Revolutionary War flag; however, the flag turned over to the state of Maryland in 1907 is not the same flag. The circle of stars with one in the center does not date earlier than the nineteenth century. The earliest illustration found thus far is that of a fourteen-star flag in a canvas dating about 1815. The painting, the *United States Frigate Washington*, is in the Bertram K. and Nina Fletcher Little collection and was exhibited at the Abby Aldrich Rockefeller Folk Art Collection, Williamsburg, Virginia, in 1969. This painting is attributed to John Samuel Blunt (1798-1835) and dated about 1815. The flag pictured on the shiphouse appears to be one with thirteen stars in a circle and a fourteenth in the center. The flag has only twelve stripes. Irregularity in the number of stripes at any given time apparently was not uncommon. In their history of the United States flag, Quaife, Weig, and Appleman quote an 1817 report to Congress which states that flags flying at the Navy Yard in Washington, D.C., and over the buildings in which Congress sat had as few as nine stripes on one and as many as eighteen on the other. In the Blunt painting, the frigate *Washington* flies a flag with fourteen stripes, and there are fourteen stars in a circle with an eagle in the center. The second vessel in the painting is the *Congress*, which also has a circle of stars, but the number of stars is not discernable. Another painting in the Williamsburg folk art collection is of the *Pilot Boat in New York Bay* painted by Thomas Chambers (1808-?) credited as being painted about



Figure 12. Flag carried by the Maryland and District of Columbia Battalion of Volunteers in the Mexican War, 1846-1848, exhibited in the National Museum of History and Technology, gift of the National Society Dames of 1846.

1835. The flag in this painting shows the stars arranged in a square with one in the center, but an illusion of a circle appears at the top of the canton as the flag droops slightly with the fluttering breeze.

BENNINGTON BATTLE FLAG, or FILLMORE FLAG as it is sometimes called. This thirteen-star flag has eleven stars arranged in a generous semicircle with the numerals "76" in the center and two stars in the upper corners of the union. The history of this flag was first recorded by John Spargo.⁶⁰ It was reported to have been used by the Bennington militia and first raised by Nathaniel Fillmore, grandfather of President Millard Fillmore, at the Battle of Bennington in August 1777. Septa Fillmore, the nephew of Nathaniel, is alleged to have acquired the flag in 1812. The Spargo report continued that the flag then passed to Philetus P. Fillmore, nephew of Septa. This information cannot be documented beyond the ownership by Philetus P. Fillmore, the third owner.

As Spargo records it:

As a boy [born 1803] Philetus had been tremendously stirred by the War of 1812 and as a result of it had acquired a passion for collecting relics of that struggle. A somewhat eccentric man in later life he was the one Fillmore who devoted himself seriously to the collection and preservation of family records and relics. He had long desired to possess the flag and after receiving it from his uncle cherished it for many years . . . during the last years of his life when his mental powers were weakened and the eccentricities which he had long manifested were intensified, Mr. Fillmore insisted that the flag had been carried by his father. . . .⁶¹

From the donor, or some other source, Spargo also states that the flag from Fillmore "was displayed on the front of a house on the corner of Central Avenue and Grand Street, Aurora, Illinois" in 1877.⁶² The flag was later exhibited in the Grand Army of the Republic's Room of the Chicago Public Library and in 1926 was presented to the Bennington Battle Monument and Historical Association by the last Fillmore owner, Mrs. Henry G. Wilson. Spargo concludes: "Obviously, therefore, we have to do with a relic which does not

depend on vague legend or conjecture. . . [6³] There can be no reasonable doubt that the flag is a genuine relic of the Revolution . . . Every portion of it is hand spun, hand woven, and hand sewn linen."⁶⁴ Unfortunately, this writer believes that there is a reasonable doubt. The following information is from observation while the flag was on exhibition in a sealed glass case.

Size: 10-foot fly by 5½-foot hoist.

Fabric: The flag appears to be of cotton rather than linen. The odd, or white stripes prove this point. The bottom or thirteenth stripe shows a selvedge along the full width of the flag. This definitely appears to be the selvedge of a cotton woven on a power loom. The union is made of three pieces of blue fabric which are stitched together. The upper piece appears to be a full width of fabric. Judging from the width of the flag and the width of union, it can be concluded that the upper part of the union is approximately 27 inches. This was a fairly common power-woven cotton width during the nineteenth century.

Heading: Appears to be heavy-weight cotton.

Sewing thread: No determination could be made.

Stitching: All was done by hand.

Grommets: None.

Date: It is not of the Revolutionary War period, but dates to sometime in the nineteenth century. Without a technical analysis, an approximate date cannot be set. With a technical analysis, a limiting date could probably be given; however, this type of power-woven cotton means that the flag could not have been made before the nineteenth century. The use of the numerals "76" and the recorded information that it was flown by Philetus P. Fillmore in 1877 would tend to make one suspect that it was probably made as a centennial or commemorative item. (The "Old 76" painted on a regimental color carried by Francis William Headman during the Revolution and now in the Smithsonian collection was added at a much later time when the flag was carried in commemorative ceremonies.) The stars are seven-pointed, which, although not conclusive, is not recorded as ever having been used in the eighteenth century. The "76" on the Bennington flag is stitched to the flag, an integral part of the design, and would not have been added later.

STARK BENNINGTON FLAG. This flag,

also preserved by the Bennington Museum, although not a bunting flag, may well have been a Revolutionary War flag. It was also described by Spargo, but since it was still in private hands at the time his book was written it was not regarded as highly as the Bennington Battle Flag (also known as the Fillmore Flag). Spargo states:

Among the numerous relics brought to Bennington [in 1877] and displayed was the remnant of a flag, which, according to the granddaughters, General Stark had cherished to the end of his days with particular affection because it had been carried in the thick of the fight on the sixteenth of August 1777. The remnant consisted of little more than the canton. That was of blue silk, much faded and cracked, bearing the thirteen white stars painted on it. Almost all the rest of the flag had disappeared, but a strip was left which showed that the body of the flag was green, either wholly or in part . . .

Spargo's information came from the *Vermont Centennial* of August 30 and September 4, 1877, and from the Bennington *Daily Banner* of August 15 and 17 of the same year. The portion of the flag that remains is the union of light-blue silk with thirteen stars painted on and scattered irregularly. There are narrow remnants of green silk with cut edges on three sides of the piece, and a single piece of silk is attached to one side and hemmed. Although this examination was also made while the piece was behind glass, there is nothing about it that would refute the story. It is most likely one of the very few ensigns of the period still in existence, even though it is more properly classified as a regiment flag than as a national banner.⁶⁵

NAVY ENSIGN OF 1780 (date in question) in The Germantown Historical Society. Unfortunately, the early history of this flag has been lost. The label credits the donor as being a Mrs. Woodruff, and the name "woodruff" is written in ink on one of the stars. The present curator reports that the early list of accessions has been lost. There is no record as to when the flag was received or of the family association. The flag is exhibited as a "U.S. Navy Ensign 1780," based on the acceptance of the dating by the donor, which was on the museum label, and the style of the flag. Although on exhibition and behind a protective barrier, an examination of the flag revealed certain characteristics that would make one question that

it could have been made as early as the eighteenth century.

Type: Thirteen-star arrangement 3-2-3-2-3.

Size: Approximately 2½ by 5 feet.

Fabric: The union seems to be of an all-worsted bunting without a seam. Judging from the general size of the flag, this could have been an 18-inch bunting; however, it was not possible to make a positive identification because of the height at which the flag was hung. The fabrics in the stripes could be examined at close hand. Both the red and the white stripes were of a fabric with a cotton warp and a wool weft. The five-pointed

stars appear to be cotton and appliquéd from each side.

Heading: A twill fabric, which appeared to be cotton, and which could be classified as drill.

Sewing thread: This appears to be cotton.

Grommets: Two, which were hand worked in what appeared to be linen.

Date: The type of cotton-warp wool fabric used in the stripes would not have been used in the eighteenth century. It has only been found in flags of the 1860s, although it may date back to the 1850s—see thirty-four-star flag, third example, on page 37.

Fourteen- through Thirty-seven-Star Flags: Comparative Analysis through the Centennial Period

Fourteen-Star Flags

There were no official fourteen-star flags, although Vermont became the fourteenth state, on March 4, 1791. Two different fourteen-star flags are illustrated in the painting *United States Frigate Washington*. This painting, dated about 1815, has been attributed to John Samuel Blunt, and these flags have been described previously. Since one of the flags also has fourteen stripes, it does not appear to be a matter of careless chance on the part of the artist. The significance of the use of the "fourteen" symbol in a painting, obviously done in the nineteenth century of a ship that was not related to the 1791-1792 period, has not been determined.

Fifteen-Star Flags

The fifteenth state was Kentucky, and it became a part of the United States of America in June 1792. Two years later on January 13, 1794, the second Flag Act was passed. It provided for fifteen stars and fifteen stripes for all official flags made after May 1795. This act remained in effect until April 4, 1818. One might assume that all official flags of this period followed the prescribed regulation, but this was not true.

Before discussing the exceptions, however, the most famous of the fifteen-star, fifteen-stripe flags will be considered. This is the Star-Spangled Banner that was the garrison flag at Fort McHenry at Baltimore, Maryland, during the War of 1812 that inspired Francis Scott Key to write the words of our National Anthem. It now hangs in the Smithsonian Institution's National Museum of History and Technology.

The Star-Spangled Banner was "made in

Baltimore by Mrs. Mary Pickersgill, a 'maker of ship's banners and flags,' assisted by her daughter, Mrs. Caroline Purdy, under contract to the United States Government for the sum of \$405.90. She had been asked to do the work by Commodore Joshua Barney, of the U.S. Navy, and General John Stricker, of the Maryland Militia. Made of 'first quality' long-fibered English wool bunting, the flag was started in July 1813 and completed August 19."⁶⁶ Further details concerning the technical aspects of the Star-Spangled Banner, which are not included in the Smithsonian brochure on it, have been made by this writer and are given here for purposes of comparative study. The term "first quality" from the official records is important in light of the information supplied by a Mr. Winter of Bradford, England, to General Butler discussed earlier, which states that "single warp" was classified as low grade. All of the bunting used in the Star-Spangled Banner is of single-ply warp. From this, it can be concluded that in the early part of the nineteenth century, the single-warp bunting was not considered low grade but rather "first quality." When this changed, if it did, or if the Americans always considered the single warp as a "first-quality" bunting, cannot be positively established; however, it continued to be the type of bunting used until American manufacture began in the middle of the nineteenth century.

Star-Spangled Banner:

Size: 42 feet by 30 feet originally (only 34 feet of the fly dimension remains).

Fabric: The union is a blue-bunting field of single-ply worsted yarns. Cotton five-pointed stars are set into the field, and the stars are approximately two feet in diameter. There are fifteen

stripes of bunting, eight red and seven white of single-ply worsted yarns. The width of the stripes varies from $2\frac{3}{4}$ inches to $2\frac{3}{4}$ inches plus approximately three-eighths of an inch for the flat-fell seams between the stripes. Each stripe is stitched vertically, being made of one width of bunting plus approximately one-third width of a second piece of 18-inch bunting.

Heading: None remains.

Sewing thread: Linen.

Stitching: By hand, inset stars.

Grommets: None.

Date: 1813. The flag is well documented and there is nothing about the identification of the component parts to question any of the information.

There is a second fifteen-star flag in the Division of Military History collection in the Smithsonian's National Museum of History and Technology, presented by L.J. Blount in 1942.

Size: 88 by 84 inches.

Fabric: Single-ply warp and weft worsted bunting is used for both the union and the stripes. The stars are of cotton muslin.

Heading: Linen.

Sewing thread: 3-ply cotton primarily; 2-ply linen to stitch heading to flag.

Stitching: By hand.

Grommets: Hand worked.

Date: The component parts of this flag would lead one to date it from the late fifteen-star period, which was the second decade of the nineteenth century.

Sixteen-Star Flags

The sixteen-star style was not adopted as official. There are no known surviving sixteen-star flags contemporary with the period of sixteen states, June 1, 1796 to March 1, 1803. At least, that is, none of this period have come to light. There were, however, sixteen-star flags. One appears in a ship painting, oil on wood, in the Abby Aldrich Rockefeller Folk Art Collection in Williamsburg, Virginia, which is lettered "M. Corne pinxit John of Salem Anno 1802." The flag has sixteen stars and sixteen stripes. Fifteen of the stars are arranged in a square with the sixteenth in the center. The artist, Michele Felice Corne, lived from 1751 to 1845. Since it is easier to arrange sixteen stars in rows of 4-4-4-4, it would seem a

logical deduction that this primitive or folk artist was painting what he saw.

As stated, there are no known sixteen-star flags from the period of the sixteen states; however, there are sixteen-star flags in existence. All of these seem to be navy boat ensigns, the earliest dating from 1861. The use of the sixteen-star flag as a navy ensign was probably due to the establishment of the navy in 1798, the period during which there were sixteen states. There may well have been sixteen-star flags used by the navy earlier than 1861; if so, none have been found.

Type: 16-star, 4-4-4-4 in the collection of the Division of Naval History, National Museum of History and Technology.

Size: $52\frac{3}{8}$ inches by $29\frac{1}{2}$ inches (including $1\frac{1}{4}$ -inch heading). It has been rehemmed and is not the original length. Stamped on the heading is "7 ft Boat Ensign."

Fabric: Worsted bunting, single-ply warp in all three colors of red, white, and blue. The union of blue bunting is 18 inches, selvedge to selvedge, with side pieces added to make the full size. The white stripes, selvedge to selvedge, measure $4\frac{5}{8}$ inches; red stripes, selvedge to selvedge, measure $4\frac{1}{2}$ inches.⁶⁷ The stars are of cotton with a turned edge, appliquéd from each side by hand.

Heading: Heavy linen, plain weave. The bunting flag was turned under and hemmed before the heading was stitched on.

Sewing thread: 2-ply linen stitching stripes and union. Two strands of 5-ply coarse cotton stitching heading. $3/2$ cabled cotton stitching stars (Z-twist singles paired to make slight Z-twist doubles, three pairs in S-twist).

Stitching: By hand.

Grommets: Two, hand worked.

Date: Stamped on heading, "NYC 1861." There is no reason to question that 1861 is the date.

Another sixteen-star flag quite similar to the one just described is in the collection of The Flag House, Baltimore, Maryland. Although it is not stamped with a date, it seems to be of the same period and is stamped "6 ft Boat Ensign NYC." The bunting is the same single-ply warp type. There are two selvedge to selvedge widths in the blue; one is $9\frac{1}{2}$ inches and the other is $12\frac{1}{2}$ inches, the size suggested by Farrington in his letter of

1869 to the brigadier general of the quartermaster station in New York City. The other component parts are the same as the flag just described.

The third sixteen-star flag, privately owned, is similar in general appearance, but differs considerably in make up.

Size: 80 inches by 44 inches.

Fabric: Worsted bunting, 2-ply warp in all three colors, single-ply weft. The blue bunting in the union measures 18 inches, selvedge to selvedge, and is the only piece with both selvedges. An additional piece is stitched on to complete the size of the union. The stars are of cotton with a turned edge, appliquéd on both sides by hand.

Heading: Heavy cotton, plain weave.

Sewing thread: 3-ply cotton is used to stitch the stripes and union; 3/2-ply cotton is used for stitching stars; and 6-ply coarse cotton is used to stitch heading.

Stitching: All by hand.

Grommets: Two, metal, not marked.

Date: Probably later than the first two sixteen-star flags described. The use of the 2-ply warp bunting would indicate an American-made bunting and place the date after the Civil War, probably 1866 or a little later. This technical discussion of mid-nineteenth-century flags may seem a little out of order, but the owner of a sixteen-star flag always feels he has an early nineteenth-century artifact. Therefore, it seems best to put them in their "numerical" star order.

Seventeen-Star Flags

Like the sixteen-star flag, by law there was no official seventeen-star flag in the period of the seventeenth state — Ohio — March 1, 1803, to April 30, 1812. From the request of Fort Dearborn to the War Department on December 20, 1803, and the compliance with that request, it is known that there were seventeen-star, seventeen-stripe, eagle flags furnished by the United States government. Unfortunately, none of these flags seem to have survived.

Eighteen- and Nineteen-Star Flags

It is doubtful that there were any eighteen-star or nineteen-star flags. Louisiana and Indiana entered the Union in 1812 and 1816, respectively.

With the War of 1812 raging, one would not expect the national flag to be changed while it was under fire. There is an 1817 reference to the eighteen-stripe flag flying over the buildings in which Congress sat. Officially, the fifteen-star flag reigned until 1818.

Twenty-Star Flags

The twenty-star flag was adopted on July 4, 1818, and remained legal for only one year. The third Flag Act passed that year established the general design for all future flags of the United States.

That from and after the fourth day of July next, the flag of the United States be thirteen horizontal stripes, alternate red and white; that the union have twenty stars, white in a blue field. And be it further enacted, That on the admission of every new state into the Union, one star be added to the union of the flag; and that such addition shall take effect on the fourth of July next succeeding such admission.

Since twenty-star flags were made for such a short time, it is extremely fortunate that one has survived.⁶⁸

Size: 103 inches by 56¾ inches.

Type: 5-5-5 arrangement of stars.

Fabric: Worsted bunting, single-ply, Z-twist warp bunting in the union with a thread count 40 by 28; red and white stripes are of single-ply warp, Z-twist bunting, thread count 38 by 30. The stars are of plain cotton weave, set into field.

Heading: Plain-woven linen.

Grommets: Three, hand-worked.

Sewing thread: 2-ply, S-twist linen for stitching both stripes and stars.

Stitching: All by hand.

Date: There is nothing about the component parts of this flag to question it having been made in 1818-1819.

Twenty-one- and Twenty-three-Star Flags

Both of these were obviously made and used. The first was used from 1819 to 1820 and the second from 1820 to 1822. There were no official twenty-two star flags since Alabama and Maine entered the Union in the same month. Although actual flags of twenty-one- and twenty-three-stars are unknown to this writer and thus have not been

examined, their component parts and method of construction would be comparable to either the twenty-star flag or the twenty-four-star flag or both. There is, however, a pictorial representation of a twenty-one-star flag in the pen and watercolor rendition of the ship *Macon*. The art work is inscribed in the lower left, "Nivelet," and across the bottom "Ship Macon Newyork & Savannah packet Cap. D. L. Porter." The watercolor, in the Edgar Williams and Bemice Chrysler Garbisch collection in the National Gallery of Art, shows the twenty-one stars arranged in the design of one large star. The twenty stars form the outline with the slightly larger, twenty-first star in the center. Although the work is attributed as having been done in 1827 or 1834, there is no reason why the flag depicted might not be assumed to be a contemporary one from the 1819-1820 period.

Twenty-four-Star Flags

Flags with twenty-four stars were the official standard from 1822 to 1836. One is in the collection of the Division of Military History.⁶⁹ This flag is of the now familiar eagle-type. The twenty-four, five-pointed stars, together with the eagle and shield, are painted on the blue-bunting union.

Size: 78 inches by 44 inches.

Fabric: Single-ply, Z-twist warp and weft, blue worsted bunting is used for the union with a thread count of 60 by 52. The selvedge to selvedge width of this bunting is 19 inches, and the selvedge is unusual in that it has two 3-ply cotton threads woven into it. Both the red and the white stripes are of a single-ply, Z-twist warp and weft, worsted bunting with a thread count of only 30 by 25.

Heading: Medium-weight, plain-woven cotton.

Grommets: None.

Sewing thread: 3-ply, S-twist cotton in all areas tested—stripes, union to stripes, heading to flag, and hem.

Stitching: By hand.

Date: The technical information verifies that this flag could be of the 1822-1836 period.

Twenty-five-Star Flags

Another flag style that was legal for only one year—July 4, 1836, to July 3, 1837—was the

addition of the twenty-fifth star when Arkansas entered the Union. There are no known examples of this type.

Twenty-six-Star Flags

The addition of Michigan as the twenty-sixth state in 1837 held the flag at this number of stars until 1845. Although the official bunting flags of this period were certainly manufactured and used, two other types of twenty-six-star flags have survived. One type is a block-printed cotton flag and the other is a printed silk.⁷⁰ This printed technique, which was much cheaper to manufacture, was intended for patriotic use at home and in political and domestic demonstrations. The cotton flag is a 27-inch power-woven cotton, probably of American manufacture; the silk flag is a 29-inch fabric with the stars arranged to form one large star, reminiscent of the earlier twenty-one-star flag.

Twenty-seven- and Twenty-eight-Star Flags

The admittance of Florida to the Union in 1845 changed the flag to twenty-seven stars for one year, and of Texas in 1846 to twenty-eight stars for one year. There may be examples of these flags in state historical collections, but neither type was examined for this study.

Twenty-nine-Star Flags

Two flags of very special interest were donated to the Smithsonian Institution many years ago by the National Society of Dames of 1846.⁷¹ The first is important because it is a twenty-nine-star flag known to have been carried by Company I, Fourth Regiment, Indiana Volunteers in the Mexican War. The war was fought from the last week of April 1846 to February 1848. Since the twenty-nine-star flag was adopted July 4, 1847, it can be assumed that this flag was made during the seven-month period from July 1847 to February 1848. The technical information is, therefore, of major importance, as the possible period of manufacture is so short.

Type: Twenty-nine stars and spread eagle painted on a cotton field.

Size: Incomplete; almost full dimension in hoist, but the width of the last stripe is not

complete; fly length, not determinable; would have measured 63 inches by ? (present amount measures 69 inches); the union is 27 inches by 43 inches.

Fabric: Union is of fine, plain-woven cotton, single-ply, Z-twist yarns. The stripes are red and white of worsted bunting woven of single-ply, Z-twist yarns (very little twist); thread count 29 by 29.

Heading: Not original.

Sewing thread: 2-ply, S-twist linen in all areas tested, stripes to each other and stripes to the union.

Stitching: Original stitching is hand stitching.

Grommets: None.

Date: The technical information agrees with the documentation that this flag was made in 1847-1848.

The second flag is a thirteen-star flag that the National Society of Dames of 1846 reported was also carried in the Mexican War. It has twelve stars in a circle with one in the center.⁷² The thirteen-star flag, documented as being from this same period, provides a comparison of the components of these two knowns. It is, after all, the technical information gained from the flags with "more than thirteen stars" that can be used to date undocumented thirteen-star flags. Although the two flags are not alike in the use of all materials, there are two very interesting comparisons. First, the technical data on the thirteen-star flag is as follows:

Type: Twelve stars in a circle with one in the center.

Size: 37½ inches by 66 inches.

Fabric: Union is of blue worsted bunting, single-ply, Z-twist warp, weft the same, but with less twist; bunting width, selvedge to selvedge, is 17 inches, thread count 28 by 27. The bunting in the red and white stripes is the same as the blue in the union with the same thread count. The stars are of plain-woven cotton appliquéed on both sides.

Heading: None. The bunting is rolled around a rope with loops at each end of the rope to serve as grommets.

Sewing thread: 2-ply, S-twist linen thread was used to stitch the stripes and the two pieces in the union together. 6-ply (3-ply, S-twist of pairs of Z-twist singles—not cabled) cotton thread is used to stitch the stars.

Stitching: By hand.

Grommets: None.

Date: The flag most likely does date from the 1840s; there is no record of the manufacture of 6-ply cotton thread before 1840.⁷³

The unions of the two flags are of completely different fabrics, so no comparison of these can be made. The buntings are quite similar, the difference of the thread count of 29 by 29 to 28 by 27 is very little, since both are the result of averaging three sets of figures. The same kind of sewing thread was used in both, with the addition of a second type in the thirteen-star flag that is not found before 1840 and seldom after the 1850s.

Thirty-Star Flags

The thirtieth star was added when Wisconsin joined the Union in 1848. This design was in effect from July 4, 1848, until July 4, 1850. No flag of this type was available for this study.

Thirty-one-Star Flags

California entered the Union on September 9, 1850. The flag was changed the following July and remained until 1858. There is a thirty-one-star flag in a private collection in which a large central star is surrounded by a double rectangular border of smaller stars.

Thirty-two-Star Flags

This flag design was in effect for only one year, July 4, 1858, until July 4, 1859, for during that time Minnesota had become the thirty-second state.

Thirty-three-Star Flags

Oregon became the thirty-third state in 1859, and the star was added that July. The design remained until 1861.

Thirty-four-Star Flags

The variety of star arrangements seems to increase with the addition of each new state. Even though the "official" flags seemed to continue to be made of bunting, or sometimes silk or cotton, the variety of materials can best be explored when several flags of the same era can be examined and compared. The thirty-fourth state was Kansas, added in 1861. Although a split in the Union occurred that year, the flag of the United States

continued to include all the states. Flags in private collections show the stars again arranged in the shape of one large star and in clusters of five six-star rosettes with a rosette in each corner, one in the center, and four single stars placed in the center of each side of the field. Described in detail below are two thirty-four-star flags in the Division of Military History in the Smithsonian Institution's National Museum of History and Technology.

Type: Thirty-four-star arrangement.

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Size: 31½ inches by 50¾ inches.

Fabric: Union, single-ply warp and weft wool bunting, not as long staple nor as wiry as regular bunting, more closely woven, not as open weave. Stripes of the same fabric. Stars, cotton, set into bunting but the raw edges not turned under, as customary.

Heading: Medium-weight cotton twill; corners of bunting adjacent and under heading reinforced with the same bunting.

Grommets: None.

Sewing thread: Cotton, three pairs of singles; Z-twist singles, S-twist thread.

Stitching: By hand.

Date: Thirty-four-star flags were official from 1861-1863; none of the component parts of this flag would cause one to doubt that it was made at that time.

The other thirty-four-star flag in the same collection is "Old Glory."

Type: Thirty-four-star arrangement with anchor.

Size: 9 feet, 5 inches by 17 feet.

Fabric: The bunting in the field and in the stripes is of single-ply warp, single-ply weft, worsted yarns. The cotton stars are appliquéd on both sides, as is the anchor.

Heading: Linen.

Sewing thread: Most of the flag is stitched with 3/2-ply cotton thread; there is some 4-ply cotton thread.

Stitching: The major seams of the flag are stitched by machine; the stars are stitched by

machine on one side, but by hand on the other. The anchor is stitched into position by hand.

Grommets: None, rope inserted.

Date: This flag, in its present state, would date from the 1861-1863 period, as indicated by the number of stars and the type of thread used. This flag, however, has an involved history. It reportedly dates from the 1820s and was repaired and new stars were added in 1861. The details of this are given in Mrs. Mary Roland's book, *Old Glory, the True Story*.

Another thirty-four-star flag is the property of The Flag House, Baltimore, Maryland. (No. M.F. 1969.13.1)

Type: Thirty-four-stars with thirty-two printed⁷⁴ on the field and two additional printed ones which are set in by hand.

Size: 41½ inches by 76½ inches plus a 1½-inch heading.

Fabric: The union is a 22½-inch fabric of single-ply, Z-twist cotton warp, and single-ply, slight Z-twist worsted weft. The thread count is 59 by 38. The stars are printed four to the width to a depth of eight rows. Two additional stars were cut from the same type of fabric and are set into the blue portion of the union, thus making a total of thirty-four stars. The stripes are of 23½-inch fabric, printed vertically, and there are seven to one width. The second piece has one stripe removed to make a total of thirteen stripes. The same single-ply, Z-twist cotton warp and slight Z-twist worsted weft that is used in the union is also used here. The thread count is 56 by 37. This is probably the same fabric as the union, but the thread count and width would indicate that there was less shrinkage in the printing.

Heading: Heavy-weight, plain cotton.

Sewing thread: Heading and hem of the flag and the three middle grommets use 6-cord, S-twist cotton thread made up of three pairs of slight Z-twist; 3-ply, S-twist cotton thread used for hand stitching. The grommets at each end are worked in 2-ply, S-twist linen.

Stitching: Heading and hem are machine stitched. Two sections of the stripes fabric and the

union have been positioned by hand. Two added stars have been stitched in place by hand.

Grommets: Five, handworked.

Date: 1861-1863. Because the two added stars are from the same type of fabric, as evidenced by the blue edge visible on the reverse side, this writer would judge that the stars were part of the original manufacture and not added by the owner to a thirty-two-star flag he already had. It is very probable that this cotton and wool fabric was first used for thirty-two star flags and that it represents an early attempt by American fabric manufacturers to produce a flag fabric that could compete with the imported English bunting.⁷⁵

Thirty-five-Star Flags

West Virginia joined the Union on June 20, 1863. Within two weeks the thirty-fifth star was officially added, but this flag remained in effect for only two years. Such a flag is in the collections of the Division of Textiles in the Smithsonian Institution's National Museum of History and Technology.

Type: Thirty-five-star arrangement.

Size: 84 by 125 inches.

Fabric: Union is 18½-inch worsted bunting; single-ply, Z-twist weft. The thread count is 34 by 32. Stripes of the same fabric, with a slight variation in thread count, average 34 by 30. The stars are of plain-woven cotton, light weight, and they are inset into the union.

Heading: Coarse, plain-woven linen.

Sewing thread: 3/2 ply, S-twist cotton thread used for hand stitching the blue bunting. 3/2-ply, S-twist cotton used for machine stitching the stripes. 3/2-ply, S-twist cotton used for hand stitching the stars. 3-ply, S-twist cotton used to hand-stitch hem the flag. 2-ply, S-twist linen used for grommets.

Stitching: Hand and machine.

Grommets: Two, handworked.

Date: 1863-1865. None of the component parts would cause one to doubt that it was made at that time.

A second thirty-five-star flag, privately owned, represents a type of printed flag that was produced by the thousands for many patriotic occasions.

Size: 14½ by 19 inches.

Fabric: Cotton muslin, block printed as a unit.

Date: 1863-1865. It is possible that flags of this type with the appropriate number of stars were produced throughout the last three quarters of the nineteenth century.

Thirty-five-star flags also were made in the unlikely arrangement of 6-6-6-5-6-6.

Thirty-six-Star Flags

Although Nevada became the thirty-sixth state in October 1864, the flag was not changed officially until the following July. Thus, there was another star-type that was only in official use for two years. One of these is in the collections of the Division of Military History in the Smithsonian Institution's National Museum of History and Technology.

Type: Thirty-six-star arrangement.

Size: 69 by 136 inches.

Fabric: The union is of 18-inch worsted bunting of 2-ply warp, single-ply weft, the same type of bunting that is used for the stripes. Stars of plain-woven cotton are appliquéd on both sides of the flag.

Heading: Medium-heavy, plain-woven cotton. There is a double row of machine stitching and a reinforcement of small-diameter rope along the edge.

Grommets: There is evidence that there were three grommets, probably of metal, that were pulled out in use for only raw, ragged edges remain. Tack holes along the edge of the heading indicate nailing for suspension at a later time.

Sewing thread: Cotton, three pairs of singles. Z-twist singles, S-twist thread.

Stitching: Machine stitching with the exception of the stars, which were stitched in position by hand.

Date: 1865-1867. None of the component parts would indicate that the flag was made at a time other than that suggested by the number of stars.

Although thirty-six stars lend themselves to an organized and balanced arrangement, flags with this number were made with the stars in the pattern of a large star with a star in the center of each point and a larger one in the center of the overall star. Another arrangement, even less plausible, has a circle of eleven stars, a larger one in the center, with the remaining twenty-four stars scattered on the union.

Thirty-seven-Star Flags

Nebraska entered the Union on March 1, 1867, and the authorized flag changed to thirty-seven stars on the Fourth of July of that year. This flag change was to have the longest period of official use since the first and second Flag Acts. Colorado, the thirty-eighth state was not admitted until August 1, 1876. Thus, the flag did not change until July 1877, an entire decade after the thirty-seven-star flag design was adopted. This is a most important period in flag analysis for comparative purposes.

The first flags to be considered are two thirteen-star flags documented from this period and made by sisters, Emma Dean and Nellie Powell for Powell's Colorado River Expedition. The first of the two reportedly was made in 1870-1871 and the second in 1872-1874. Since the flags are documented and are made of materials not usually associated with this period, it seemed best to describe them here, rather than with the thirteen-star flags. Both of these flags use the same materials, and it is assumed that the sisters shared the same supplies.

The red and blue buntings used are about the same with a slight difference in thread count, which might be due to the different dyeing process. Both are woven of single-ply, Z-twist yarns—the thread count for the blue is 61 by 61 and for the red, 58 by 61. The white "bunting" (?) is of wool on a cotton warp and both are Z-twist, single-ply yarns with a thread count of 66 by 63.

Sewing thread: The flags are stitched with 2-ply, S-twist silk. The earlier flag used some purple silk thread also. The cotton stars are attached with 5-ply, S-twist cotton thread.

Each name is embroidered on the reverse side of the union of the respective flags. Single-ply, warp buntings were not used by the navy or army, although they were not unusual for civilian use according to the correspondence with the United States Bunting Company. The use of silk thread to stitch wool would not have been uncommon for the home seamstress. The use of 5-ply cotton thread is unusual, for it was never a common sewing thread.

There are two, thirty-seven-star, bunting flags in the collections of the Division of Military History in the Smithsonian's National Museum of History and Technology. These differ from each other in materials and methods of construction.

Type: Thirty-seven-star arrangement of 6-6-7-6-6-6. (Smithsonian acc. no. 86270, cat. no. 34937.)



Size: 90 by 141 inches.

Fabric: The union is 18½-inch, worsted bunting in a two-ply, S-twist warp; with a single-ply, Z-twist weft of a medium shade of blue which is badly faded. The thread count is 36 by 32. Both red and white stripes are of a single-ply, Z-twist warp, and a single-ply Z-twist weft. Their thread count is 35 by 30. The stars are of a plain-woven cotton set into the bunting.

Heading: Plain-woven, medium-weight linen.

Sewing thread: The union is hand stitched with 2-ply, S-twist linen; 3/2 cabled-cotton was used to stitch stripes, stars, and heading.

Stitching: Machine stitching was used in the stripes, hem, and heading. The stars were set in by hand. Seams in the union were made by hand, and the union is attached to the stripe ends by hand stitching.

Grommets: Two metal (3-part) grommets. One is at each end of the heading with evidence that there was a third originally in the center. The remaining hole has been handworked with 3/2 cabled-cotton thread.

Date: 1867-1877.

Type: Thirty-seven-star arrangement of 8-7-7-7-8. (Smithsonian acc. no. 26913, cat. no. 202288.)

Size: Approximately 9 feet (105 inches) by approximately 18 feet (227 inches) plus 1¼ inches heading.

Fabric: Union is 18¾-inch worsted bunting in a 2-ply, S-twist warp, single Z-twist weft. The thread count is 34 by 37 of indigo blue. Both red and white stripes are of 2-ply, S-twist warp, and single-ply, Z-twist weft. The thread count is 31 by 31. Cotton-muslin stars are appliquéd on the front and reverse sides of the flag.

Heading: Cotton duck.

Sewing thread: 3-ply, S-twist, brown cotton

thread used to stitch the blue bunting and 3-ply, S-twist, white-cotton thread used to stitch the stripes, stars, and heading.

Stitching: Hand stitching was used to appliquéd the stars, and machine stitching was used for all the seams.

Grommets: None. There is rope through the heading with iron rings in the rope-end loops.

Date: 1867-1877.

There are two other star arrangements during the thirty-seven-state period that should be mentioned. One is of two concentric circles of stars, the inner circle of thirteen and the outer of twenty-four, totaling thirty-seven. A more unusual arrangement was specifically for the centennial year; eighty-one stars are used to make up the numerals 1776 and 1876 in the union of the flag with the latter placed below the former. This was obviously for commemorative rather than official purposes.

Identifying Unknown Flags

The information presented in the preceding pages can be used, to a limited extent, in determining the significance of the component parts of an "unknown" thirteen-star flag and thus help in establishing a date for it. The following charts can be used as a guide in identifying and dating a flag, but it is not usually possible to establish a specific date. Sometimes the combination of materials used will narrow the period of probable manufacture to one decade. The dating of the flag is always limited to *no earlier than the first use of the latest datable component.*

Materials

EXAMPLES OF BUNTING			
Warp ply	Warp twist	Width in inches	Earliest reference or flag examined
?	?	20	1802-1812
single	Z	18	1813
single	Z	?	1818-1819
single	Z	19	1822-1836
single	Z	17	1847-1848
single	Z	4½-4⅝	1861
single	Z	18½	1863-1865
single	Z	9½	1860s
single	Z	12½	1867 (and probably earlier)
single	Z	12	1867 (and probably earlier)
double	S	18	1865-1867
double	S	17¾	1867
double	S	17½	1867
double	S	18¼	1867
double	S	18¾	1867
double	S	18¾	1867
double	S	18¾	1867
double	S	25	1869
double	S	12½	1869

The earliest use of 2-ply warp bunting in an American flag of known date that has been examined is of the thirty-six-star period, 1865-1867. Therefore, the use of a 2-ply warp bunting in a thirteen-star flag immediately indicates that the flag was probably made after 1865. The use of single-ply warp bunting in a thirteen-star flag does not mean that it was necessarily made before 1865, as this type of bunting continued to be woven and used into the twentieth century. Although of interest and use in comparative study, the same thread count would not necessarily mean the same bunting or bunting of the same period. The size of the yarns can vary. A low thread-count bunting can look more compact than a high one if the yarns in the latter are finer. A number of very small fragments of bunting, with reputed historical association, were presented to the Smithsonian Institution in 1919.⁷⁶ They were not accompanied by any documentation, but an "association" was given in a hand-written label. Whether or not these pieces of bunting were from flags of the period inferred cannot be verified. There was, however, nothing found in the technical examination that would indicate that they were not. Because of their possible interest in future studies of flags, the information that could be derived from each is given. The bunting samples are all of Z-single yarns in warp and weft (see analysis on page 42).

Although the thread count of the *Serapis* and the *Macedonian* are the same, the fabrics do not look alike. There is more irregularity in the yarn size in the *Serapis*. The selvages of the *Guerrière* are not as compact as the blue *Macedonian*.

Stars: Linen was commonly used for the stars of the bunting flags during the first decade of the nineteenth century. Dated flags from the Star-Spangled Banner of 1813 throughout the nineteenth century used cotton for the stars, although linen continued to be used in some examples.

ANALYSIS OF BUNTING SAMPLES				
<i>Donor's association</i>	<i>Association date</i>	<i>Thread count</i>	<i>Color</i>	<i>Other remarks</i>
<i>Serapis</i>	1779	28x28	blue	no selvedge
<i>Little Belt</i>	1811	too small	white	some traces of red bunting fibers and a seam stitched with 2/2 ply, S-twist wool thread
<i>Guerrière</i>	1812	too small	blue and white	1 1 1 1 1 1 selvedge
<i>Java</i>	1812	30x24	red	no selvedge
Mexican flag captured at Monterey	1840s	36x36	white	2-2-2-2 selvedge
Commodore Perry's flag	1812	48x45	blue	no selvedge
<i>Detroit</i>	1812	too small	white	part of a selvedge, -?-3-3-3-1-1 . . .
<i>Macedonian</i>	1812	28x28	red and blue	selvedge on blue 1-1-1-1-1-1-1
<i>High Flyer</i>	1812	too small	blue	
<i>Chippewa</i>	1812	too small	white	
Royal Standard captured at "Lerento"	?	30x26 28x24	blue quite discolored, probably white	



Figure 13. A thirteen-star flag flies from the staff in the lithograph, *Bay of New York, Taken From the Battery, 1851*. The accepted use of the thirteen-star flag at this time is evidenced by its appearance in this typical mid-nineteenth-century scene. As can be noted the arrangement of the stars takes the form of a large six-pointed star, or a 1-4-3-4-1 arrangement. (The Edward W.C. Arnold Collection, lent by The Metropolitan Museum of Art. Photograph courtesy Museum of the City of New York.)

Heading: The use of linen or other bast-fiber fabrics for the heading continued throughout the nineteenth century. To date, cotton for the heading has not been found earlier than the second decade of the nineteenth century; however, during the middle- and late-nineteenth century, it was the more common fabric used for the heading and was a standard, heavy-weight fabric, usually duck.

Grommets: Many of the earlier bunting flags do not have grommets. If the heading is original and intact, it acts as a casing for a rope with loops at each end of the fly length. When there are grommets in the flags of the first half of the nineteenth century, they are handworked. Metal grommets have not been found in a flag of known origin dating earlier than the 1860s.

Thread: Eighteenth-century bunting flags, and those of the very early nineteenth century, are stitched with linen thread. Silk might also have been used, and it was certainly used to stitch the silk flags. Wool thread, although difficult to sew with and probably used infrequently, may also have been utilized. Cotton thread does not seem to

have been used for stitching bunting flags prior to the 1820s. Its initial use was to stitch the cotton stars into position. It was later used to stitch the entire flag. The 3/2-cabled cotton thread was not used before the 1860s. There is, however, a type of 3-ply, cotton thread with each ply of a pair of single yarns that dates to as early as the 1840s; this type might be confused with the 3/2-cabled cotton of the 1860s. Careful examination of the sewing thread is necessary. A 3-ply, Z-twist silk thread was developed for machine stitching by 1852; it was known as machine twist. A 3-ply cotton thread was very common during the middle and third quarter of the nineteenth century. The use of mercerized cotton thread would indicate a flag of twentieth-century manufacture.

Stitching: If the flag is machine-stitched in any part, it would have to date after 1850. Hand stitching of flags, however, remained common through the third quarter of the nineteenth century, especially for stitching the stars. The use of the zigzag machine stitch to sew the stars dates from about 1900.

Thirteen-Star Flags of Unknown Origin: Technical Examination, Description, and Estimated Date

Every unknown flag that has been examined has not been described, for many bore the same characteristics; however, any flag that has a variation in technical content even though the major components are the same has been included. It should not be assumed that any flag that has characteristics not included in this group is in itself rare or unusual.

The group will be divided into two main categories. The "A" series are those stitched by hand, and the "B" series are those stitched by machine. If any part of the flag has machine stitching as part of its original construction, it will be included in the second category.

Unless otherwise indicated, more than one of each type has been examined.

A. Hand Stitched

A-1. *Type:* 3-2-3-2-3

Fabrics: Single-ply warp and weft worsted bunting used for field and stripes. Stars of cotton muslin.

Heading: Linen warp and tow or other short bast weft.

Grommets: Not recorded.

Sewing thread: 2-ply linen to stitch all bunting. 2/2 cotton to stitch stars.

Date: First quarter of the nineteenth century, possibly quite early. Only one of this type has been examined.

A-2. *Type:* Arrangement of stars not recorded.

Fabrics: Single-ply warp and weft worsted bunting used for field and stripes. Stars of cotton muslin.

Heading: Linen.

Grommets: Not recorded.

Sewing thread: 3-ply cotton primarily. 2-ply linen to stitch heading to flag.

Date: First half of the nineteenth century, possibly quite early.

A-3. *Type:* Arrangement of stars not recorded.

Fabrics: Single-ply warp and weft worsted bunting used for field and stripes. Stars of plain-woven cotton.

Heading: Cotton twill.

Grommets: Not recorded.

Sewing thread: 3-ply cotton primarily. 3-ply of paired singles to stitch stars.

Date: Mid-nineteenth-century, 1840-1860.

Only one of this type has been examined.

A-4. *Type:* 3-2-3-2-3

Fabric: 2-ply warp, single-ply weft, worsted bunting for field and stripes; full width of blue bunting, 18 inches. Stars of plain-woven cotton.

Heading: Warp, bleached Z-twist linen. Weft, unbleached Z-twist coarse fabric.

Grommets: None, cord run through hem in heading.

Sewing thread: 3-ply, Z-twist linen stitching bunting. 3-ply of paired Z-twist cotton singles thread S-twist to stitch stars.

Date: Mid-1860s—based on the combination of the 2-ply bunting and the type of cotton thread. Only one of this type has been examined.

A-5. *Type:* 4-5-4

Fabrics: 2-ply warp, single-ply weft, worsted bunting for field and white stripes, single-ply warp and weft worsted bunting for red stripes; no full width of bunting.



Figure 14. Illustration of a thirteen-star flag, example of Type A.7, variation; type: 4-5-4. The size is 29 inches by 50½ inches with a 1¼-inch heading. The fabrics are 2-ply, S-twist warp (largest area measures 16½ inches, but is not a full width), single-ply weft, worsted bunting for field and stripes. Stars of medium-weight linen are applied to each side. The heading is plain-woven coarse linen. Grommets are one-piece, metal-eyelet type. The sewing is all by hand, and the sewing thread is 3-ply, S-twist cotton thread for all stitching. The dating is probably the late 1860s. (Cat. No. T.14401, Smithsonian photo 77128-A.)

Stars of cotton appliquéd to each side. Height of field is eight rather than the more common seven-stripe high, making it rest on a red stripe.

Heading: Coarse plain-woven linen and bast fiber (possibly jute).

Grommets: None, coarse twine through heading, which acts as a casing.

Sewing thread: 3-ply, S-twist linen to stitch bunting and heading. 2-ply, S-twist cotton to stitch stars.

Date: Based on the use of the 2-ply warp bunting this flag must be judged to be of the mid-1860s. All of the other materials could be of any earlier period. Only one of this type has been examined.

A-6. *Type:* 4-5-4

Fabric: 2-ply warp, single-ply weft, worsted bunting for field and stripes; full width of blue bunting, 19 inches.

Heading: Plain-woven heavy cotton.

Grommets: Two, hand-worked.

Sewing thread: 2-ply linen stitching bunting. 3-ply of paired cotton singles stitching stars. 3-ply cotton stitching heading.

Date: Mid-1860s; based on the combination of 2-ply bunting and the type of cotton used. Only one of this type has been examined.

A-7. *Type:* Various

Fabrics: 2-ply S-twist warp, single-ply weft, worsted bunting for field and red stripes, single Z-twist warp and single weft for white stripes. Stars of cotton.

Heading: Linen.

Grommets: Two, hand-worked.

Sewing thread: 2-ply, S-twist linen stitching bunting. 3-ply S-twist stitching stars.

Date: Probably third quarter of the nineteenth century.

A-8. *Type:* 4-5-4

Fabrics: 2-ply S-twist warp, single-ply Z-twist weft, worsted bunting; two types

of blue used in the field—darker blue, 9-inch selvage to selvage, thread count 39 x 35, and a lighter blue, only one selvage (therefore no width determinable), thread count 35 x 30. Red stripes in a 2-ply S-twist warp, weft of single Z-twist worsted bunting, thread count 36 x 35; white stripes in a single-ply Z-twist warp and a single-ply Z-twist weft worsted bunting, thread count 36 x 32. Stars of plain-woven cotton appliquéd from each side.

Heading: Coarse plain-woven linen.

Grommets: Two, hand worked.

Sewing thread: 2-ply S-twist linen stitching bunting and heading, 3/2 Z-twist cotton stitching stars.

Date: Mid-1860s to end of the third quarter nineteenth century. This 9-inch blue bunting is of a 2-ply warp while the 9½-inch bunting in the sixteen-star flag was on a single-ply warp. Only one of this type has been examined.

A-9. *Type:* Arrangement not noted.

Fabrics: Two types of blue bunting, both single-ply warp and weft, one a full width of 20 inches; red and white worsted bunting of 2-ply warp and single weft. Stars of plain-woven cotton.

Heading: Linen.

Grommets: Not noted.

Sewing thread: 2-ply linen for bunting, 3-ply cotton for stitching stars. 2-ply worsted thread for hem (could have been warp of white bunting).

Date: Because of the 2-ply warp in the bunting, it would date from the mid-1860s. Only one of this type has been examined.

A-10. *Type:* Arrangement not noted.

Fabrics: 2-ply warp, single-ply weft worsted bunting in field and stripes. Stars of plain-woven cotton.

Heading: Heavy plain-woven cotton.

Grommets: Not noted.

Sewing thread: 3-ply cotton for bunting and stitching stars. 4-ply cotton (heavy) stitching heading to flag.

Date: 1860s to 1870s.

There are several variations to the group of

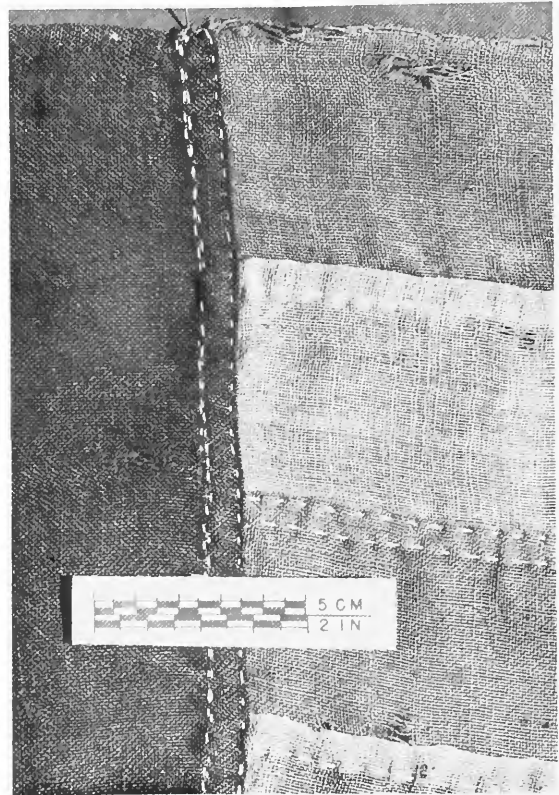


Figure 15. Detail of flag in Figure 14 showing hand-stitched flat-fell seams of stripes and joining field. With X 3.5 power magnification, the 2-ply warps in the field and stripes can be easily spotted. (Smithsonian photo 77128.)

hand-stitched flags that included 2-ply warp bunting and have some stitching with 3/2 cabled cotton thread. Both of these factors limit the dating of the flag from the mid-1860s. The use and variety of other materials adds to their interest.

A-11. *Type:* Arrangement not noted.

Fabrics: 2-ply warp, single-ply weft, worsted bunting in both the blue field and the red stripes; single-ply warp and single-ply weft worsted bunting for the white stripes. Stars of plain-woven cotton.

Heading: Linen.

Grommets: Hand worked (number not noted).

Sewing thread: 2-ply linen for bunting, 3/2 cabled cotton for stitching stars.

Date: Mid-1860s or later. Flags of this type with all bunting of the 2-ply warp are also found.

- A-12. *Type*: Twelve stars in a circle with the thirteenth in the center.
Fabrics: 2-ply warp, single-ply weft, worsted bunting in both the red and white stripes; single-ply warp, single-ply weft, worsted bunting with a full selvedge to selvedge width of 19 inches is used in the union, which is eight stripes wide, rather than the more usual seven stripes wide. Stars are of plain-woven cotton.
Heading: Cotton duck.
Grommets: Metal (two-part), one at each end.
Sewing thread: Blue bunting seams and stars with 3-ply, S-twist cotton. Stripes, hem, and heading with 3/2 cabled cotton.
Date: Although the metal grommets might lead one to believe this flag was even later, it may date as early as the 1860s. Only one of this type has been examined.
- A-13. *Type*: Star arrangement not noted.
Fabrics: 2-ply warp, single-weft, worsted bunting. Stars of plain-woven cotton.
Heading: Not noted.
Grommets: Not noted.
Sewing thread: 3-ply cotton to stitch bunting. 3/2 cabled cotton to stitch stars. 3-ply linen thread (heavy) to stitch heading.
Date: Mid-1860s or later.
- A-14. *Type*: Star arrangement not noted.
Fabrics: 2-ply warp, single-ply weft, in all worsted bunting; blue bunting shows an 18-inch width, selvedge to selvedge. Stars of plain-woven cotton.
Heading: Heavy linen of bleached (warp) and unbleached (weft) yarns.
Grommets: None, rope through hem in binding.
Sewing thread: 3-ply silk used to stitch bunting. 3/2 cabled cotton to stitch stars. 4 strands of 3-ply linen to stitch heading.
Date: Mid-1860s or later.
- The use of clamp-dyeing to produce a thirteen-star flag has been noted in one example submitted for identification.
- A-15. *Type*: Star arrangement not noted.
Fabric: 2-ply warp, single-ply weft, in an all-worsted 21-inch bunting; the stars are resist-dyed in the clamp-dyeing method;

stripes stitched.

Heading: Cotton twill, stamped "CED," probably the name of the manufacturer, but the initials have not been identified.

Grommets: None.

Sewing thread: 3-ply cotton.

Date: Probably a small boat ensign of the period of the late 1860s (after 1867) to the middle 1870s (when improved sewing-machine construction guides made clamp-dyeing too expensive.)

- A-16. A number of thirteen-star flags constructed of clothing fabrics have been referred to the Smithsonian Institution for examination. All of these were stitched totally or in part with 3/2-cabled cotton thread and date from the mid-1860s or later. These are believed to be products of home manufacture produced for commemorative reasons at the time of the 1876 centennial. Most of them are constructed of a variety of cotton goods of the period. One presented the following assortment.

Fabrics: Blue cotton dimity for the field with plain cotton stars. Red stripe of cotton-warp, wool-weft, dress fabric known as nun's veiling. White stripe of cotton-warp, wool-weft fabric known as Shaker flannel and typically used for underclothes.

B. Machine Stitched

With few exceptions, thirteen-star bunting flags that have been examined which are stitched, all or in part, by machine use the 2-ply warp bunting. Most of these flags are stitched with 3/2-cabled cotton thread, especially for the machine stitching. There are a few exceptions. Whenever a record of the star arrangement was kept, it usually is the 3-2-3-2-3 style. One exception is noted. If grommets were noted in the report, they were always the metal type. Most of the machine-stitched flags fall into the first class.

- B-1. *Type*: 3-2-3-2-3 star arrangement.

Fabrics: 2-ply warp, single-ply weft, worsted bunting (many of the flags are small and the full width of the bunting was not required for the field).

Heading: Heavy cotton in a basket weave or its variation, sometimes a cotton twill.

Grommets: Always metal, sometimes 2-part, sometimes 3-part. The 2-part is

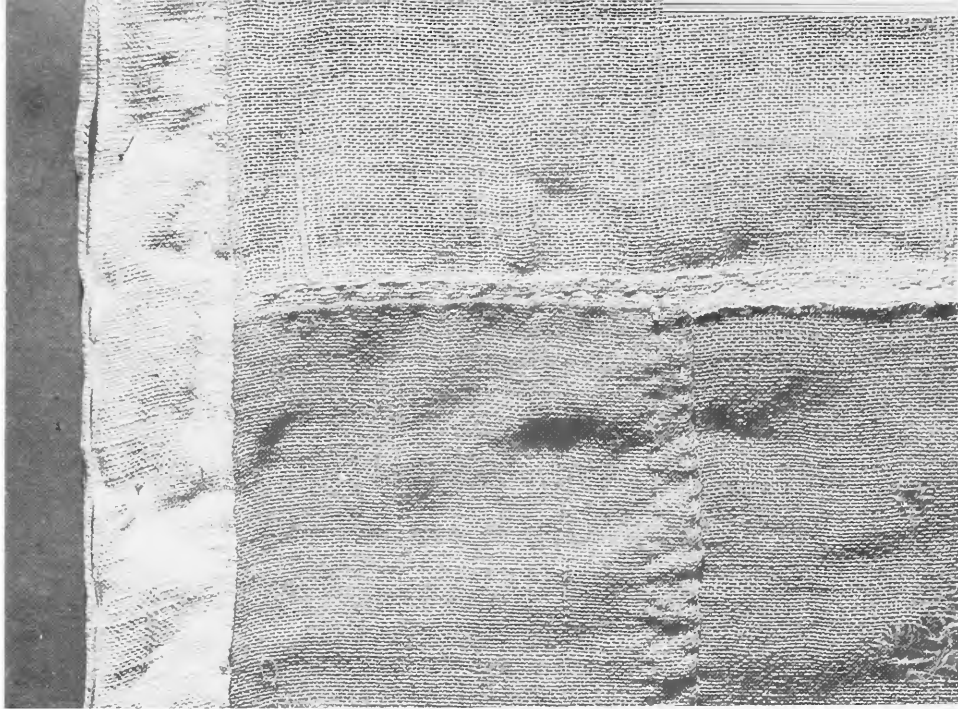


Figure 16. Detail of construction technique of a thirty-five-star flag (1863-1865). Although this flag was constructed in the same general period as the one illustrated in Figure 14, a great variation in materials used will be noted. The fabrics are single-ply, Z-twist warp and weft worsted bunting. The heading is plain-woven coarse linen. Sewing is by hand and machine with the machine-stitched flat-fell seam and heading stitched by machine. The hand-stitched reinforcement piece is part of the original flag. (Smithsonian photo 77127-B.)

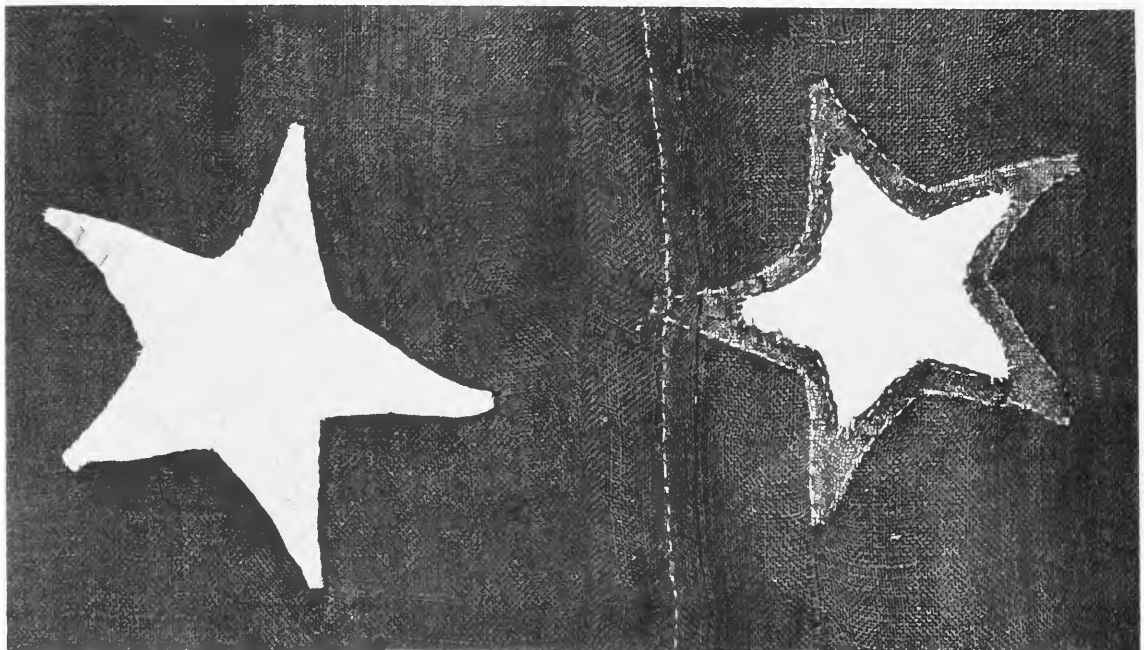


Figure 17. Second detail of construction technique of a thirty-five-star flag, (1863-1865). Stars of light-weight muslin are set into the bunting, showing the appearance from each side. Cotton thread, 3/2 S-twist, was used to stitch the stars in by hand. (Smithsonian photo 77129-C.)

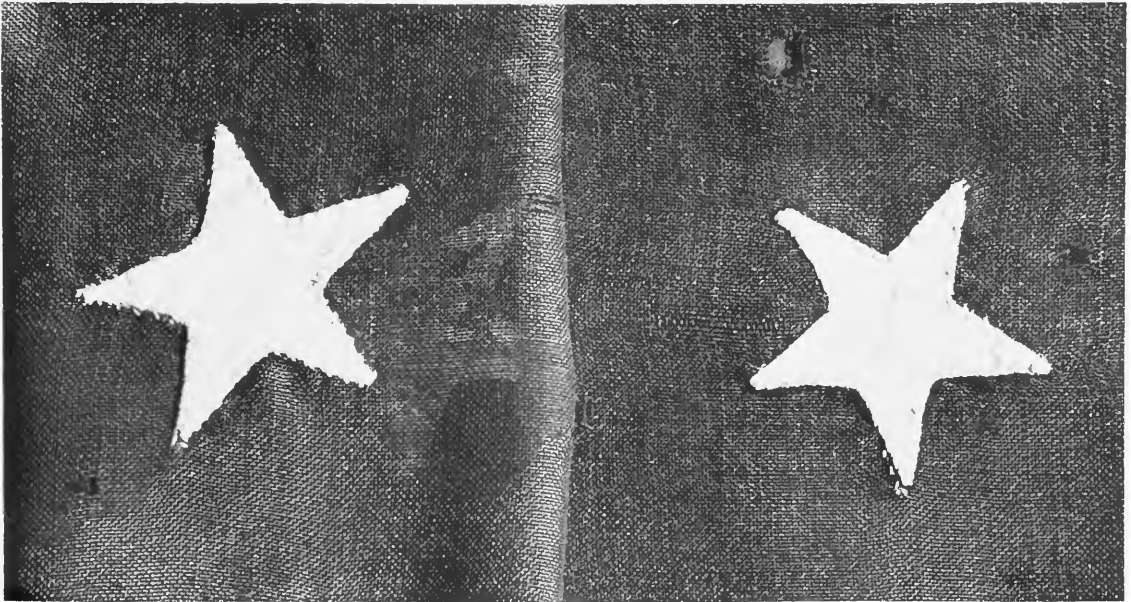


Figure 18. Detail of stars from Figure 14, a thirteen-star flag of the late 1860s. Stars of medium-weight linen are appliquéd from each side, showing the appearance from each side. Cotton thread, 3-ply S-twist, was used to hand stitch the stars. (Smithsonian photo 77127-C.)

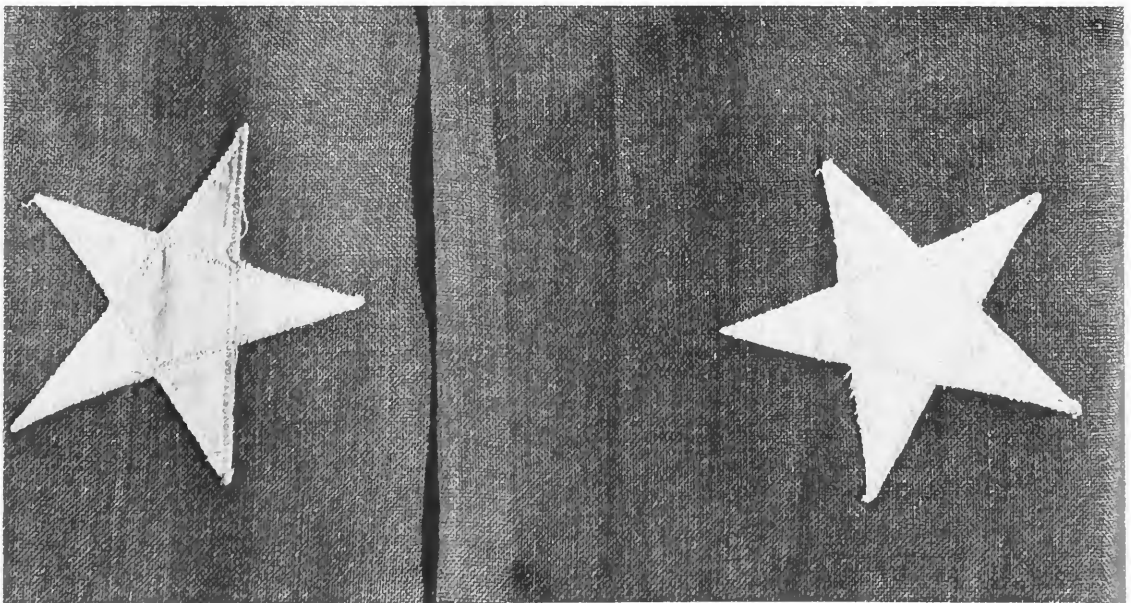


Figure 19. Detail of the construction of a forty-five-star flag (1896-1908). Stars of medium-weight muslin are appliquéd to each side with the same row of stitching. Cotton thread, 3/2 S-twist, was used to machine stitch (zigzag) the stars and are shown from each side. The bunting of this flag is of the 2-ply warp type. The forty-five-star flag is the earliest of the multi-starred flags that this writer has found with zigzag machine stitching. (Smithsonian photo 77129.)

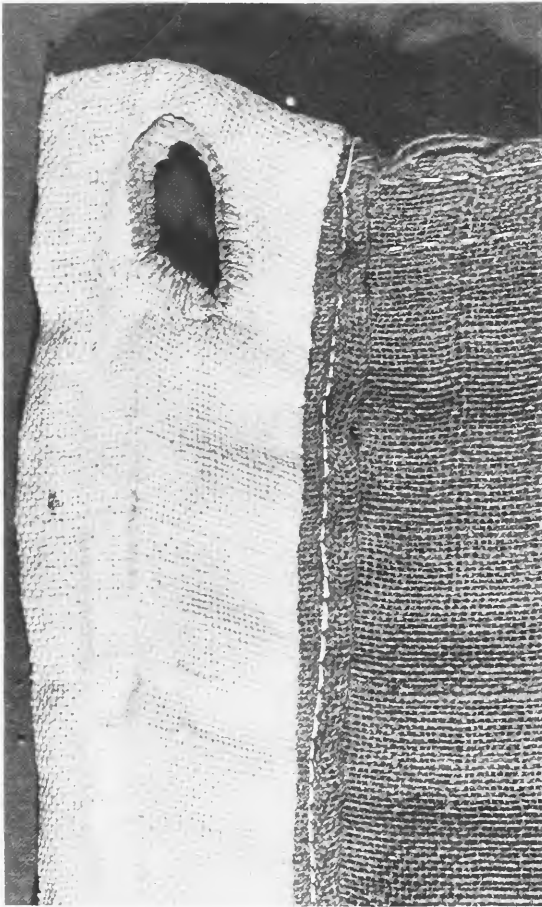


Figure 20. Detail from the heading of the thirty-five-star flag showing hand-worked grommet, buttonhole stitch with 2-ply, S-twist linen thread. (Smithsonian photo 77129-B.)

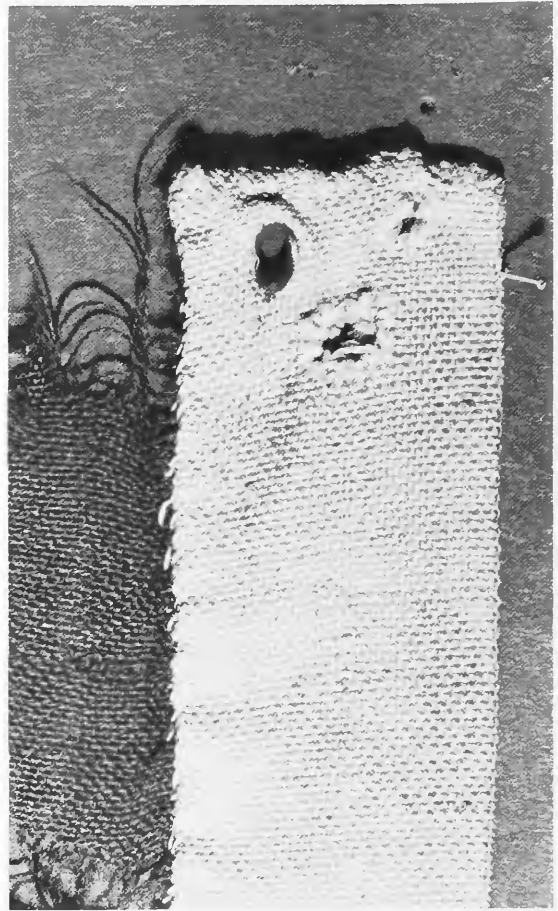


Figure 21. Detail of the heading of the thirteen-star flag, Figure 14, showing a one-part, metal-eyellet grommet, one of three that were at each end. (Smithsonian photo 77128-B.)

the earlier type, but does not necessarily mean it is an earlier flag.

Sewing thread: 3/2 cabled cotton and 3-ply cotton in the same flag.

Stitching: The basic construction of the flag is using the lockstitch machine. A zigzag machine is used for appliquéing the stars, one from each side with the same row of stitching.

Date: The use of the zigzag would limit the date of the flag to 1900 or later. Although some of these flags may be navy small-boat ensigns, many are twentieth-century special events or commemoratives.

- B-2. An exception of B-1 is that of a slightly larger flag, 42 by 66 inches, with all the same technical identifications except the arrangement of the stars. In this one, the thirteen stars are arranged in a circle, with an anchor in the center. The field is large enough to give a full width of bunting, which measures 25 inches. This style is a yacht ensign and was manufactured in the twentieth century and as late as 1931 by Annin & Company, New York.
- B-3. Another exception to B-1 is in the use of 2-ply cotton thread for all machine stitching. Other characteristics are the same.
- B-4. A third exception is the use of 3-ply cotton

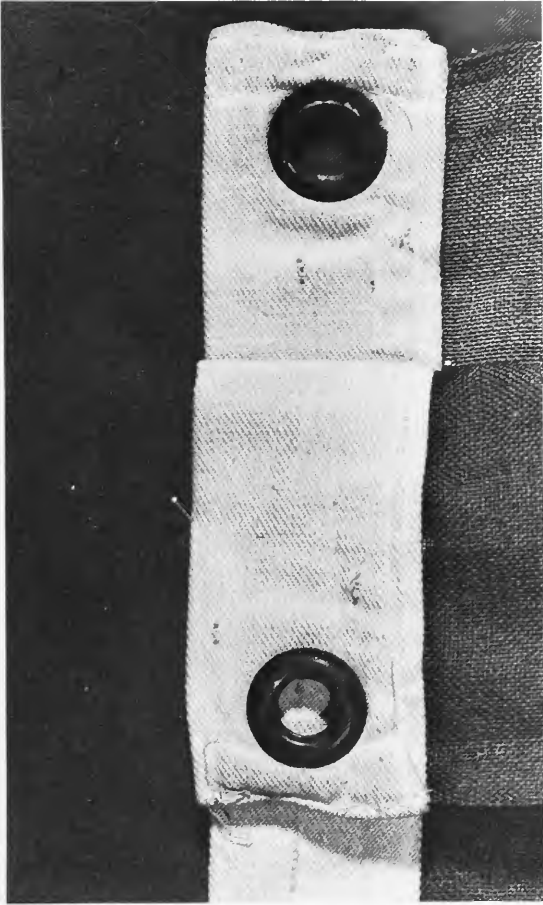


Figure 22. Detail of the heading of the forty-five-star flag showing both sides of a two-part metal (brass) grommet of the type used extensively in the last quarter of the nineteenth century. The heading is of 2/1 cotton twill that could be classified as a drill, machine stitched with 3/2 cabled cotton thread. (Smithsonian photo 77129-A.)

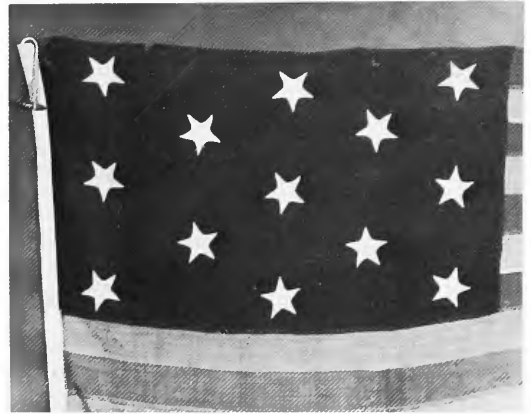


Figure 23. Illustration of the field of a 13-star flag in the 3-2-3-2-3 arrangement. The field is pieced. One is a 2-ply warp, single-ply weft, worsted bunting in full width (selvedge to selvedge) 18 inches wide, and a second piece is of single-ply warp bunting. The cotton-muslin stars are appliquéd from each side; all the stitching is by hand. The heading of cotton duck has no grommets, but employs the use of a braided linen rope to serve their purpose. The bunting is stitched with 2-ply, S-twist linen thread while the stars are stitched with 3/2 S-twist cotton thread. The flag dates from the late 1860s to the 1870s. (Smithsonian photo 77130.)

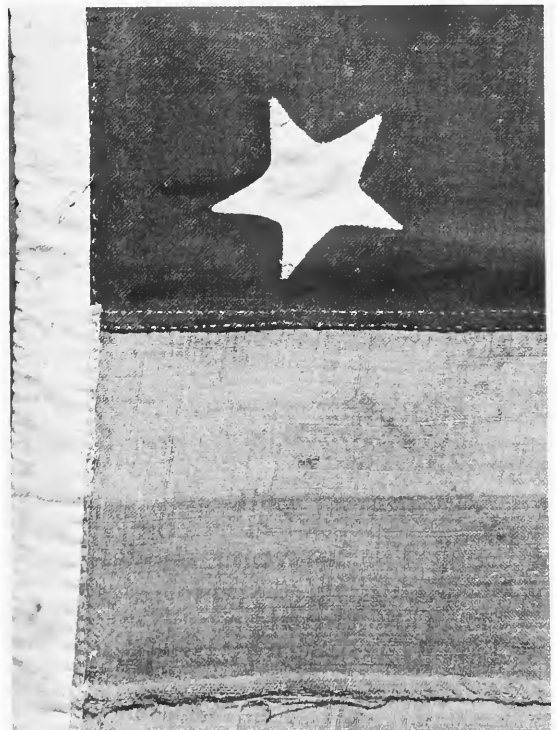


Figure 24. Detail of illustration 23 shows the plain-weave structure of the cotton-duck heading and the use of both stitched and printed stripes. The stripes are of red, 2-ply warp bunting and white, 2-ply warp bunting and also of some clamp-dyed bunting stripes of red and white, a 2-ply warp bunting. (Smithsonian photo 77127-A.)

thread for all the machine stitching. Other characteristics are the same. This example is stamped "6" on the heading. The flag measures $39\frac{1}{2}$ by $81\frac{3}{4}$ inches. The use of 3-ply cotton thread is not uncommon in the twentieth century.

- B-5. Basically the same as B-1, but using both the lockstitch machine and a double chainstitch machine (Grover and Baker stitch) for the construction of the flag. This would date from the nineteenth century, as the use of the double chainstitch machine for straight stitching was discontinued.
- B-6. Similar to B-1, but using the double chainstitch machine for the entire construction of the flag. This particular flag was probably made in the home, as opposed to commercial manufacture. The double chainstitch used three times as much thread as the lockstitch and would probably not have been used for the commercial production of flags. The stars, also stitched by the two-thread, double chainstitch, would not have been a feasible method of construction on a contract basis. It was not until the stars were attached by the zigzag stitch, which did not require the fabric to be turned under, that machine stitching was used commercially for this part of the manufacture.
- B-7. Flags that combine both machine and hand stitching most frequently used the $3/2$ -cable cotton thread for the machine stitching and any of a variety of threads for hand stitching the stars. Sometimes the handstitching was with the same cabled thread, but more frequently a 3-ply cotton variety was used. The other characteristics, including the metal grommets, are usually the same. The practical use of the zigzag machine to attach the stars was later than the introduction of metal grommets. This would date this type to 1900.

Although the navy reportedly discontinued their use of the thirteen-star flag as a small-boat ensign by 1916, these flags continued to be made in the twentieth century for patriotic or commemorative purposes. The Annin & Company of New York illustrates in their "1931 Wholesale Catalog" a number of flags that might easily be assumed, by

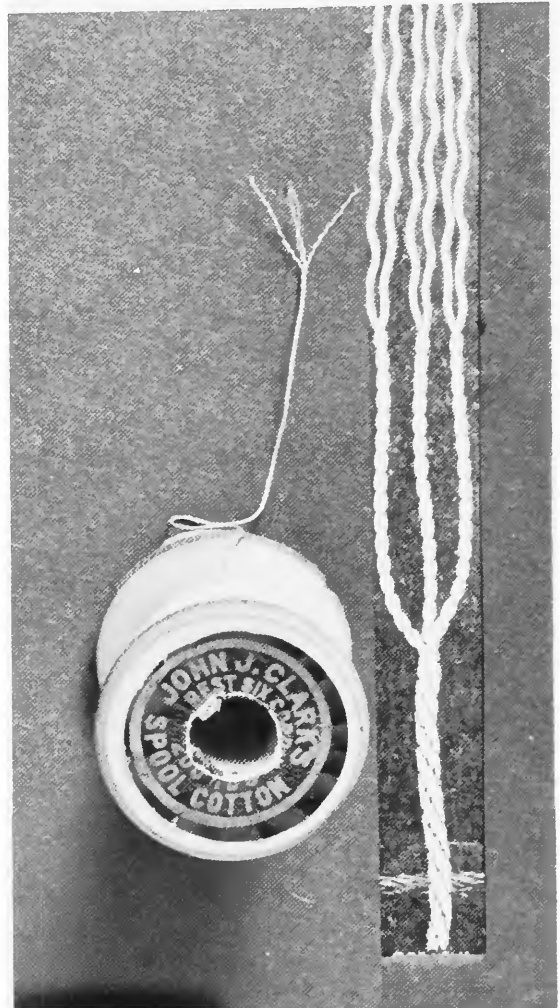


Figure 25. A spool of $3/2$ S-twist cotton thread, called "Best Six Cord" with a drawing to the right showing the construction detail as it might appear under magnification. The Z-twist of the pairs of yarns and the S-twist of the thread produce the $3/2$ cabled thread. "John J. Clark's" is the branch of the company that remained in Scotland. George and William Clark came to Newark, New Jersey, in 1866 to form the American firm of Clark Thread Company. The company was absorbed by J. and P. Coats in 1899, but spools marked with the Clark name continued to be made. (Smithsonian photo 77130-A.)

the unwary, to be earlier flags. Advertised was a "Printed Silk Flag of 1777" that has thirteen stars in a circle. It was produced in a variety of sizes. Also available was the "Printed Silk Flag of 1812" with fifteen stars and fifteen stripes, as well as thirteen-star flags in the 3-2-3-2-3 arrangement. In

printed silk, especially when machine stitched, the flags would probably not be mistaken for early ones, but these same styles were also available “in all wool bunting.” The machine stitching would not be as obvious in a bunting flag. After flags are used and become soiled, they “age” quickly. In addition to “Yacht Ensigns,” thirteen stars in a circle with an anchor in the center, a “Private signal” using twenty stars to form a large star on a

blue ground was advertised together with an “American pennant” of thirteen stars, arranged in one horizontal row, with two long stripes—one of red and one of white—all in wool bunting.

Therefore, it is well to keep in mind that *thirteen-star flags are not rare*. Although they were the official banner only from 1777 to 1795, they continued to be made throughout the nineteenth and into the twentieth century.

Notes

1. Schermerhorn, *American and French Flags of the Revolution 1775-1783*.
2. Balderston cites a number of examples of Washington's requests for national colors. Since supplies of food and clothing were in short supply, it is not surprising that national flags were not forthcoming. State regiments brought their own colors.
3. Op. cit. (note 1), p. 141.
4. Correspondence, John Carter Brown Library.
5. In the manuscript collection of the Library of Congress.
6. In the collection of the Library of Congress.
7. For additional information on the design using the eagle and thirteen stars, see Alexander J. Wall, "The Flag with an Eagle in the Canton" in *The New-York Historical Society Quarterly Bulletin*, vol. 27, no. 3 (October 1933).
8. This unfinished Trumbull painting is in the collection of the Detroit Institute of Arts. In it only nine stars are sketchily indicated in the flag. Although Theodore Sizer, in his *The Works of Colonel John Trumbull* (Yale University Press, 1967), suggests that this painting was done about 1786. The Detroit Institute of Arts reports in a letter to this writer that "from our records, this [date] is not known for certain."
9. An example of the Mondhare sheet is in the Mariners Museum, Newport News, Virginia.
10. Davis (1907), pp. 8-18.
11. Davis (1910 Supplement), p. 14.
12. Spargo, p. 22.
13. Perrin's *British Flags*, p. 43.
14. *Draper's Dictionary*, pp. 61 and 313.
15. Cited in John James, *History of the Worsted Manufacture from the Earliest Time* (London: Longman, Brown, Green, Longmans, and Roberts, 1857), pp. 225-226.
16. *Ibid.*, p. 228.
17. Taylor, *Scenes of Wealth or Views & Illustrations of Trade, Manufactures, Produce and Commerce*.
18. *Ibid.*, p. 74.
19. Consolidated Correspondence File 1794-1915, Office of the Quartermaster General, Record Group 92, Box 304, National Archives.
20. Letters received, Coxe-Irvine (circa 1797-1842), Record Group 92, Box 47, National Archives.
21. *Ibid.*
22. Op. cit. (note 19), Box 302.
23. Op. cit. (note 19).
24. Op. cit. (note 19), in folder marked "Flag of the United States, 1818."
25. Cooper, *Invention of the Sewing Machine*, p. 135.
26. Op. cit. (note 19), Box 122.
27. Unfortunately the early company records have been lost. The information was furnished by Mr. Ames Stevens, chairman of the board, Ames Textile Corporation (an outgrowth of the United States Bunting Company and other companies) and in the company's centennial booklet published in 1965.
28. William S. Cole, *The American Wool Manufacture*, vol. 2 (1926 edition), p. 155.
29. *The Stars and Stripes and Other American Flags*, p. 260. This remark should not be interpreted to mean that all flags with the union or canton resting on a red stripe were made at Norfolk. Obviously, they were not. The Star-Spangled Banner, which is too early and which is known to have been made in Baltimore, has the union resting on a red stripe.
30. *Ibid.*
31. Op. cit. (note 19), Box 122.
32. Op. cit. (note 19), Box 122. S. Nicholson who made the report summarized it as follows: "... the English binding gave way first, fagged out and was torn more than the American... the colors in both buntings stood well." Although the only samples marked "English bunting" with this file are single-ply warps and the only samples of the United States Bunting Company are double-ply warps, it is not known for certain that these were the specific fabrics that were used to make the flags in the navy test, but it can be assumed that they were.
33. Op. cit. (note 19), Box 122.
34. The documentation of the Star-Spangled Banner states that it was made of "first quality" bunting. It is a single-ply warp bunting of English manufacture.
35. Op. cit. (note 19), Box 122.
36. The bunting samples described are in Box 122 in the National Archives. The examination was made using a 3.5X double-lens magnifier, a thread counter, and a metal tape measure. The slight variations in width could be due to the sharp folds in the bunting.
37. No documents relating to the contract with W. Wilson were uncovered by this writer. Peleg Dennis Harrison in *The Stars and Stripes and Other American Flags*, p. 263, states "The first bunting made in the United States was manufactured by the New England Worsted Co. of Saxonville, Mass.; one of the first woolen mills established... Experiments in weaving bunting began in the Fall of 1837, or in the following Spring, and this fabric was placed on sale as early as 1840. For more than twenty years bunting composed the larger part of the product of this factory, which continued to manufacture it until sometime in the sixties. This company is now known as the Saxonville Mills. The bunting made at this factory was not suitable for flag making, the first

American product used for that purpose . . . U.S. Bunting Co. . . .” Unfortunately, there is no description of this bunting. If it could not be used for the purpose for which the fabric is generally used, one wonders what it was like, what it was used for during those twenty-some years, and whether one could or should consider it “bunting”?

38. Op. cit. (note 25).

39. *Ibid.*, p. 59.

40. The inference is that Farrington held the patent in question. He did not. “Press Dyeing,” as it was termed in the patents, was introduced by Edward Brierly of Lowell, Massachusetts, and patent 6,932 was granted to him on December 11, 1849. This patent was primarily intended for stripe and plaid fabrics. In 1867, John Holt was granted a patent for the “method of making dies for figures in press-dyed fabrics.” Since John Holt was also from Lowell, this technique of dyeing was obviously in use there. On April 26, 1870, Holt was granted patent 102,267 for the use of press-dyeing in “signal and other flags.” This must have been what was meant by the statement: “it is patented.” Farrington did apply for and receive two patents related to this process. He reportedly improved the apparatus used, which he stated “is especially valuable when applied to the manufacture of flags and signals.” His patent 124,427, issued March 12, 1872, states that “. . . by the use of my improved apparatus the stripes of the ‘American Flag’ are produced with more cleanly-cut edges, and with less trouble, loss of material and expense of making than by use of the apparatus commonly employed for press-dyeing By the press-dyeing method commonly in use I have found it impossible to produce a stripe wider than five or six inches with clean cut edges. This is owing to the fact that the dies used are not hollow, but solid; and it is a practical impossibility to clamp solid dies of a greater width By my improved method the frame-dies, being hollow and light, yield, adjust and fit themselves to each other and to the clamp-plates with a comparatively light pressure” A second patent was issued to him on the same day; it covered the forming of the stars in a similar manner. A third patent related to the die for press-dyeing was issued to Farrington on October 3, 1876.

41. Op. cit. (note 19). Letter of April 19, 1869, Farrington to Meigs. This meant that there was one red and one white stripe per width of bunting.

42. Reports and Awards, International Exhibition 1876, vol. 5, Groups 8-14, edited by Francis A. Walker (Washington: Government Printing Office, 1880), p. 65; Group 9, *Wool and Silk Fabrics* by John L. Hayes.

43. *Ibid.*, p. 159.

44. George S. Cole, *Dictionary of Dry Goods* (revised edition, Chicago, 1894), p. 142: “It is an expensive process, for in order to prevent the part of the piece not intended to be colored from taking the dye, it is covered up and squeezed by two pieces of wood.”

45. Grommet patents:

E.H. Penfield	Sept. 19, 1848	Pat. No. 5,779
J. Allender	June 20, 1854	Pat. No. 11,108
W. Brown	July 2, 1867	Pat. No. 66,296
J.W. Norcross	Dec. 15, 1868	Pat. No. 84,900

J. Mair July 6, 1869 Pat. No. 92,199

In the specifications for Penfield’s patent 5,779, the inventor only claims an improvement on existing grommets of the type. Mair’s patent 92,199 is the only one of the five that is a 3-part grommet.

46. Division of Naval History in the Smithsonian Institution’s National Museum of History and Technology, accession 2157, catalog number 47. Naval Ship Flag, owned by Captain Hall, Expedition 1864-1869, marked “Annin & Co. Makers, N.Y.”; this company had been in business since 1847. Made with 2-ply warp bunting, 3-ply cotton thread stitching cotton stars, 2-ply linen thread stitching bunting and heading (end binding), heading cotton with 2-part metal grommets.

47. National Archives, Quartermaster correspondence, 1794-1905, Box 302. Letter from War Department dated December 31, 1877: “. . . made of bunting . . . 8 ounce cotton duck, 4 inches wide, 2 when complete, galvanized iron staples and ring at each end of flag faceted with 3 copper rivets. Acting Quartermaster General.”

48. Op. cit. (note 25), chapter 2, pp. 17-38.

49. Op. cit. (note 25), figure 132, pp. 122-123.

50. Op. cit. (note 25), p. 135.

51. Edward Baines, *History of the Cotton Manufacture in Great Britain*, (London, 1835), p. 346.

52. *The Story of Cotton Thread*, The Spool Cotton Company, p. 8.

53. *Scientific American*, vol. 6, no. 7 (November 2, 1850), p. 50.

54. The limiting factors set by the methods of manufacturing the fabric, thread, and type of stitching, as has been noted, do not change frequently. Usually, the same technique was used over a long period of time and, therefore, does not enable one to limit the dating to within a few years. Sometimes the *combination of factors* does permit the assignment of a limited date.

55. Grand Lodge Proceedings, 121st Annual Communication for 1909, p. 124 et seq.

56. Mimeographed sheet, “The Guilford Battle Flag,” dated September 1968, distributed by the State Department of Archives and History, Raleigh, North Carolina.

57. It is the author’s conjecture that the stripes might have been removed to the count of twelve at the time of the Civil War. Since the stars are set into the field, one more of these could not be removed.

58. *Guide Book and Descriptive Manual of Battle Flags in the Flag Room of the State House at Annapolis, Md.* by Lt. Gen. Milton A. Reckord, The Adjutant General, State of Maryland, January 1965.

59. My sincere thanks to Mr. Gilbert A. Crandall, chief, Travel Development, Department of Economic Development of the State of Maryland for arranging to have Mrs. Matina Luff, Chief of the State House Hostesses, assist me in making a personal examination of the flag.

60. Spargo, *The Stars and Stripes in 1777*, published in 1928 by the Bennington Battle Monument and Historical Association, Bennington, Vermont. John Spargo was director of the association at this time and most likely was instrumental in acquiring the flag.

61. *Ibid.*, pp. 44-45.

62. *Ibid.*, pp. 34 and 37.

63. *Ibid.*, p. 38.

64. *Ibid.*, p. 46.

65. Most of the regiment flags described by Gherardi Davis in his *Regimental Colors in the War of the Revolution* (New York, 1907) supplement of 1910, were of silk, with embroidered or painted designs, and frequently were square rather than rectangular. See pp. 8-10, 12-14, and 16-18. In the 1910 supplement, p. 14, is printed a bill (June 1776) for considerable quantities of yellow, blue, green, and pink silk used in making flags for regiments in the New York Line.

66. *The Star-Spangled Banner*, Washington, D.C.: Smithsonian Institution. Special Publication 4529.

67. The width of these buntings seems incredibly narrow, but the selvages are quite evident. Since it is known that the English were producing 12- and 12½-inch buntings in the mid-1860s and that the United States Bunting Company was producing a 12½-inch bunting in 1869, there is no reason to question the 4½-inch bunting. Such a width could have been produced on a ribbon-type loom with several widths being woven at a time.

68. Private collection of Mr. and Mrs. Boleslaw Mastai of New York.

69. Smithsonian Institution's National Museum of History and Technology, accession number 143646.

70. *Op. cit.* (note 68).

71. The twenty-nine-star flag, accession number

10242, catalog number 185, and the thirteen-star flag, accession number 10664, catalog number 3964.

72. The use of this thirteen-star design on an army flag of the 1840s carried into battle would suggest that neither the arrangement of the stars nor the use of a thirteen-star flag was uncommon in the second quarter of the nineteenth century. The particular arrangement of twelve stars in a circle with the thirteenth in the center seems to date from the 1840s, while the earliest illustration is about 1835. See *Flag of Cowpens*.

73. *Op. cit.* (note 25), p. 64.

74. The print of this fabric has the fuzzy edge along the pattern on the wrong side that is a characteristic of a printed-resist. The press (or clamp) dyeing is alike on both sides. The size of the repeat of the stars, with the unprinted area allowing for the two additional stars to be set in, would suggest block rather than roller-printed fabric.

75. Whether or not this is the "bunting" manufactured by the New England Worsted Company of Saxonville, Massachusetts, referred to by Harrison, is not known. Harrison's statement that "it was not suitable for flag making" may have meant that it was not durable and not used by the military or navy. It may have been used for flags for civilian users. This, of course, is pure conjecture.

76. The gift was from Mrs. Allen McLane through Andrew Hussey Allen, accession number 63786, catalog number H.33946.

Appendix

Facts about the United States Flag

[Adapted from Smithsonian Information Leaflet 262, *Facts about the United States Flag*, Department of Armed Forces History, National Museum of History and Technology, Smithsonian Institution, Washington, D.C. 20560.]

Until the Executive Order of June 24, 1912, neither the order of the stars nor the proportions of the flag were prescribed. Consequently, flags dating before this period sometimes show unusual arrangements of the stars and odd proportions, these features being left to the discretion of the flag maker. In general, however, straight rows of stars and proportions similar to those later adopted officially were used. The principal acts affecting the flag of the United States are:

First Flag Act, June 14, 1777, provided for 13 stripes and 13 stars, white in a blue field, representing a new constellation.

Act of January 13, 1794, provided for 15 stripes and 15 stars after May 1795.

Act of April 4, 1818, provided for 13 stripes and one star for each state, to be added to the flag on the 4th of July following the admission of each new state.

Executive Order of President Taft dated June 24, 1912, established proportions of the flag and provided for arrangement of the stars in six horizontal rows of eight each, a single point of each star to be upward.

Executive Order of President Eisenhower dated January 3, 1959, provided for the arrangement of the stars in seven rows of seven stars each staggered horizontally and vertically.

Executive Order of President Eisenhower dated August 21, 1959, provided for the arrangement of the stars in nine rows of stars staggered horizontally and eleven rows of stars staggered vertically.

Official Number of Stars in the U.S. Flag, 1787 to Present

13 Stars	First Flag Act	to 1795	33 Stars	1859	1861
15 Stars	1795	to 1818	34 Stars	1861	1863
20 Stars	July 4, 1818	to July 3, 1819	35 Stars	1863	1865
21 Stars	1819	1820	36 Stars	1865	1867
23 Stars	1820	1822	37 Stars	1867	1877
24 Stars	1822	1836	38 Stars	1877	1890
25 Stars	1836	1837	43 Stars	1890	1891
26 Stars	1837	1845	44 Stars	1891	1896
27 Stars	1845	1846	45 Stars	1896	1908
28 Stars	1846	1847	46 Stars	1908	1912
29 Stars	1847	1848	48 Stars	1912	1959
30 Stars	1848	1851	49 Stars	1959	1960
31 Stars	1851	1858	50 Stars	1960	Present
32 Stars	1858	1859			

Glossary

Canton. The top inner quarter of a flag. See "Union."

Color. See "Flag."

Drill. A durable cotton fabric in a twill weave.

Field. The ground of each division in a flag.

Flag. A piece of fabric of distinctive design used as a symbol.

Flag sheet. A broad piece of paper printed with the flags as designated by the title of the sheet.

Flat-fell seam. The descriptive term is taken from the verb *fell* meaning to sew by folding one raw edge under the other and sewing flat. In making this seam, there are two rows of stitches. The first row joins the raw edges on the right side; the second completes the fell by turning one raw edge under the other and sewn flat by a second row of stitches.

Fly. The length of an extended flag as measured from its staff or support.

Grommet. An eyelet of firm material used to strengthen or protect a small opening in a fabric such as a sail, tent, or flag.

Heading. The extra cloth binding or support stitched to the hoist of the flag.

Heddle. One of the set of parallel strings or wires that with their mounting compose the loom harness, which is used to control the warp yarns in a loom.

Hoist. The height of the flag when flying; the width of the flag as opposed to the length or fly.

Selvage or Selvage. The self edge at either side

of a woven fabric is formed as the weft yarn, carried in the shuttle, loops back to form each succeeding row.

Standard. A conspicuous object, such as a flag, formerly used on the top of a pole to mark a rallying point, or to serve as an emblem.

Thread. When used in a technical description the term implies a compound cord made up of more than one ply, line, or yarn. A 3-ply thread, therefore, means three single yarns twisted together. When fibers are twisted to form a yarn, or when yarns are twisted together to form a thread, the twist can be either from right to left or from left to right. If the twist is from left to right, the angle of the twist is \ and termed S-twist. If the twist is from right to left, the angle of the twist is / and termed Z-twist.

Thread, cabled. If several threads are twisted together, the product is considered to be a cabled thread. In sewing thread this was limited to twisting together three threads, each of which was made up of two yarns twisted together. The term used is 3/2-ply thread, three of two. If the thread is made up of three pairs of yarns, each pair of which has not been twisted, it is not a cabled thread. This distinction is indicated in the technical analysis.

Union. A symbol emblematic of a union, as used on a national flag and placed in the upper inner corner (canton) of a flag.

Yarn. A single strand of spun fibers.

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