

# History on Your Face - Common Spectacle Styles Before, During and After the Civil War, 1835 - 1870

by Alan R. McBrayer and Thomas F. Valenza

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The human eye is far from being a perfect optical organ. The most commonly used correction of vision problems are mounted lenses – eyeglasses – not only at present, but also during the last few centuries. During the 18th and 19th centuries English-speaking populations universally called these contrivances “spectacles”. The term “spectacles” specifically refers to eyeglass frames that have side pieces, or temples, to hold the glasses to the eyes. This article provides accurate information about spectacles styles available during the 1835 through 1870 period. During this period, the term “eye-glasses” referred to frames that did not have side pieces or temples, and were held to the face simply by sitting on or clamping to the nose. “Eye-glasses” (also called nose spectacles and, later, “pince-nez”), goggles, eye shades and eye protectors will be considered in a future article. The term “eyeglasses” did not come into use until later decades. Primary source materials provided virtually all of this painstakingly researched

information – this approach being used to eliminate misattributions and mistakes published and repeated in secondary sources over the years.

Although this article focuses on the use of spectacles immediately before and during the Civil War, the styles under discussion were widely and commonly available from approximately 1835 through 1870. Basic types did not change significantly during this period; however, the spectacles manufactured from around 1835 to about 1870 do have specific characteristics. Understanding these styles and characteristics are important to understanding the correct and authentic types of eyewear manufactured and worn during these years. Early photography, artwork, advertisements, illustrated optical catalogues and spectacle frames marked by manufacturers and retailers supply much of the information we used to accurately assess the types and styles of spectacles used during this period.

American colonists brought with them various types of eyewear, both to improve their sight and to protect their eyes from damage. For the first two hundred years after their arrival almost all of these vision aids came from England or Europe. Domestic manufacture rapidly increased after the War of 1812, and hundreds of Americans worked as spectacle makers during the next six decades.

Until approximately 1860, these craftsmen made spectacles one pair at a time, from start to finish. This included cutting, filing, fitting, soldering and finishing all parts, edging lenses to shape and fitting them into the frames. In the decades prior to the Civil War, mechanics devised labor-saving devices that improved these processes – stamping or cutting out some parts using punches and dies, and devising improved soldering techniques. Occasionally steam powered machinery came into play, especially for polishing. Steam power, however, was not a major factor. For example, the company that became the American Optical Company, the largest spectacle manufacturer in the world, did not replace water-powered machinery with steam power until 1853.<sup>1</sup> Since most spectacle frames were handmade throughout the period, craftsmen would sometimes create unusual, innovative or one-of-a-kind spectacles. These atypical examples are beyond the scope of this article; consequently, we discuss only the common styles used during this period.



Unidentified Union soldier wearing oblong spectacles with wide sliding temples. Adjusted for contrast. (Library of Congress).

## Components of Spectacle Frames

All spectacle frames, despite differences in material, style and form, are made of the same basic components. They are:

a. **The optics**, known as spectacle glasses, the “eyes”, and, rarely during this period, lenses. The optics can be corrective for far or near sight, or can be flat colored glass. Although many spectacles were fitted by opticians to the individual consumer (especially in larger cities), most were purchased by persons who tried on several, or many, spectacles until one pair seemed to work. Merchants often allowed their customers a period of time to exchange glasses until happy with their vision improvement.

b. **The eye wire** – This metal, tortoiseshell or horn frame surrounds the optics. (Some “frameless”, “rimless” or “skeleton” spectacles do not have eye wires – the bridge and/or the joints attached directly to the spectacle glasses. These did not appear in American optical catalogues until after 1870. We do not discuss them here).

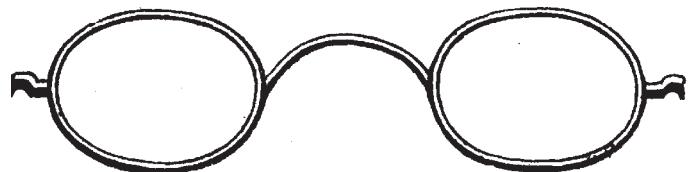
c. **The bridge** – This self-describing part connects the front two eye wire mounts, and rests upon the nose.

d. **The joints** – These are the hinges attached to the outside edge of the eye wire mounts, joining the eye wires and the temples.

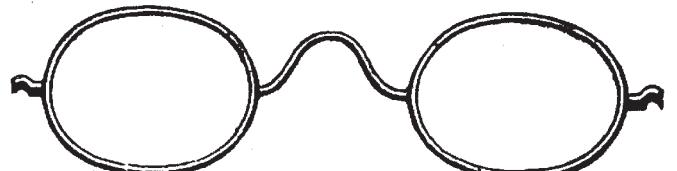
e. **The temples** – These are the side pieces or bars that run from the joints across the sides of the head, thus holding the spectacles to the face. Up through the Civil War, the majority of spectacle temples (except curl temples) had loops at the end. These loops grew progressively smaller during the period – some found on late period steel wire spectacles are barely larger than the eye of a needle.

These five components, plus various screws, pins and rivets, are common to spectacle frames made prior to 1870. After 1870, the popularity of “frameless” spectacles and of eye-glasses of all styles (what are commonly called “pince-nez”) dramatically changed the market.

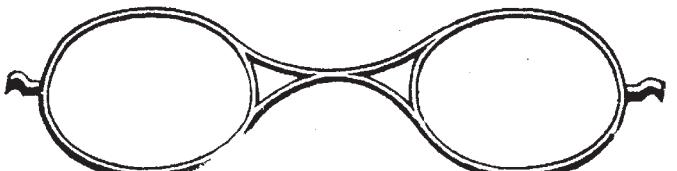
The optics used in spectacles during this period are generally not relevant to frame style, so we will limit the discussion of optics to the basics. Imported lenses, or “spectacle glasses”, were used by almost all American spectacle makers until well after the end of the Civil War. The lenses, regardless of eye wire shape, were originally round, and chipped and ground into the eye wire shapes described below. The common glasses in use were double convex (for far-sighted persons), double concave (for near-sighted or myopic persons), periscopic lenses (for both far and near-sighted persons, depending on the configuration of the lens), and plano (flat) glass (for colored and protective spectacles). All of these optic types were in use both by soldiers and by the general population. Most clear lenses were made of glass, but slabs of clear quartz crystals, called “pebbles”, were also used. Pebbles were harder and considerably more expensive, so most spectacles had glass lenses. Bifocal spectacles, first described by Benjamin Franklin,



(Fig. 1.)



(Fig. 2.)



(Fig. 3.)

(Source: *Ophthalmic Surgery and Treatment: with Advise on the Use and Abuse of Spectacles*, John Phillips, Chicago, 1869, p. 34).

were also available. The Franklin bifocal, sometimes called “double vision spectacles”) consisted of two half lenses mounted in each eye wire - the upper half-lens for distant sight, and the lower half lens for close-up sight, such as reading. A second rarely-used type of bifocal lens had a single glass in each eye wire ground to different focal lengths.

The “style” or “type” of spectacles comes down to variations of appearances caused by the eye wire (and lens) shape, the type of bridge, the type of joints, and the type of temples. The heavier weight frames with round lenses of the 1700’s and early 1800’s slowly gave way to oval lenses after the 1780’s. By 1820, the oval glass spectacle frame dominated the market. However, whether having round or oval glasses, the earlier frames of iron, steel and silver (and rarely gold) fell from favor during the 1830’s, and by 1840 most frames were lighter-weight newer styles. There was few significant changes in commonly available spectacles until the 1870’s. Prior to 1835, the majority of spectacle frames had nose bridges known to modern collectors as the “C” bridge (Fig. 1). By the mid 1830’s, the “crank” or “English” style bridges gained popularity and were almost ubiquitous by the 1840’s (Fig. 2). The “X” bridge was sometimes used on spectacles for the myopic and on inexpensive imported spectacle frames. (Fig. 3)<sup>2</sup>. The similar “K” bridge can be seen in the illustrations of the “Coquille” spectacles and the “Invisibles”, both shown on the following pages. During the late 1850’s, a bridge type appeared that simplified the assembly process. These bridges had upturned flanges or “scrolls” where the bridge attached to the frames. One of Lincoln’s spectacles in the Library of Congress has a



Gold octagon eye wires with loop-slide temples and crank bridge. (Author's collection).

"scroll bridge", which are also shown in an 1866 patent drawing.<sup>3</sup> Our opinion is that most of these bridges, especially those with an exaggerated scroll-like curve at either end, are post-war examples.

About 1860, American companies began to use mass production techniques to manufacture spectacles; this trend quickened with the use of new production methods and new patents. For example, the 1859 patent of Memphis resident Theodore Noel<sup>4</sup> introduced the concept of standard size lenses, so that replacement or switching of lenses became a simple task. This seemingly obvious improvement allowed any merchant to offer for sale frames and lenses easily assembled to order without need of special tools or training. Most examples of the Noel patent are post-1870.

Spectacles were inexpensive and readily available to anyone requiring vision correction or eye protection. For example, just before the Civil War, the Philadelphia firms of McAllister & Brother and James Queen & Company both offered "good quality" plated spectacles for 50 cents per pair, or \$3.50 a dozen. In Jackson, Mississippi the "finest quality steel" or coin silver spectacles with best quality optics cost \$1.00 and \$1.70, respectively.<sup>5</sup>

Spectacle frames included those made from gold, silver, German silver, brass, plated brass or German silver, tortoise shell, blued steel wire and common steel or iron wire. A tariff encouraged the domestic manufacture of spectacles. Gold alloys used for spectacle frames had varying amounts of silver, copper, and sometimes small amounts of other metals. Often made to order, these frames were available in alloys from 8 karat to 18 karat.

Many affordable spectacle frames were made of a silver alloy called "coin silver" or "pure coin". The coin silver alloy used in American coins was, by an act of Congress passed on January 18, 1837, 90 percent silver and 10 percent copper. Modern tests, however, show that the silver alloys used by spectacle makers vary from as little as 80 percent silver to about 93 percent silver. During the 1830's and afterwards, a new inexpensive metal gained popularity for the manufacture of spectacle frames and many other items. In New York City in 1829, German chemist Louis Feuchtwanger introduced the alloy "German silver", composed of varying amounts of copper, zinc and nickel. Spectacle frames of this material became widely available after 1835. The cost and durability of German silver spectacle frames made them very popular, even as newspaper

articles warned the public about peddlers passing this material off as genuine silver. "Look Out – There is no trading in a small way by which people are more grossly cheated than by peddlers who deal in spectacles."<sup>6</sup> Accused of either misrepresenting frame materials or optical quality, traveling spectacle peddlers had a disreputable reputation, despite the honesty of some merchants.

All spectacles of the period are held together with joints, the hinges that attach the temples to the eye wire. Although there were innovative exceptions, there were only two basic designs that saw wide usage during the Civil War period. First, there are joints held together with a screw, and a separate pin acts as the pivot for the temples. This type was widely used from the invention of temple spectacles in the early 1700's until replaced by updated designs from the 1870's forward. A second hinge type appeared about 1850, although this date is uncertain. These hinges were used on very inexpensive plated, brass and German silver frames, and used a single screw or pin to both hold together the joint and to act as pivots for the temples. Examples were recovered from the cargo of the steamboat *Arabia*, which sunk in 1856, and are now on display in a Kansas City museum. These so-called "German spectacles" could be purchased for less than 50 cents, and the customer got what he paid for - many opticians disparaged them as the product of unscrupulous peddlers.

After 1843, American manufacturers made steel wire spectacle frames in small numbers, although most were still imported. Many of these had been "blued" by heating the polished frames on a hot plate. This treatment made the steel harder and more flexible. If the bluing wore off it was a simple matter to heat and re-blue the frames. These frames were extremely popular by the 1860's, widely praised for being light and durable.

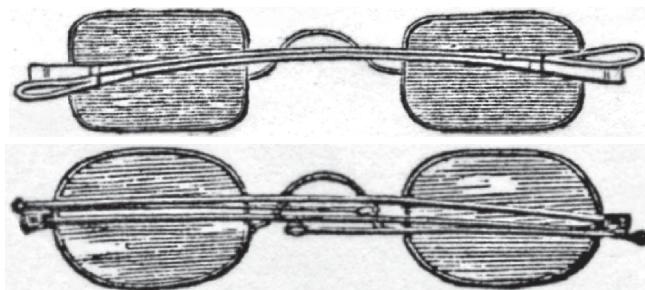
Spectacle makers also produced tortoiseshell spectacle frames throughout this period. These were valued for being light weight and for ease of polish, but the frames were easily broken. Tortoiseshell comes from plates on the shell of the hawksbill turtle (*Eretmochelys imbricata*). Imported plates of horn, principally from cattle, sheep and goats had also been a popular material for the manufacture of spectacle frames. Both tortoiseshell and horn largely fell out of fashion by the 1860's, although both materials were still used in manufacturing lorgnettes, a spectacle front held to the eyes with a handle.

The Civil War apparently slowed further development of spectacles and eye glasses. Not only did inventors concentrate on war-related ideas, many spectacle makers joined the ranks as soldiers - as examples, Henry F. Chandler served with the 22nd Connecticut Volunteer Infantry, and Elbridge C. Howard served with the 6th Battery Massachusetts Light Artillery. The only U.S. vision aid patent granted during the War years went to a gentleman from Birmingham, England for an improvement in eye-glasses (later known as "pince nez"). In the thirty-five years prior to the Civil War, there were only twenty-two U.S. patents related to spectacles or vision aids; in the five years following the War, twenty-nine patents were granted, many of these attempting to make eyewear lighter in weight and easier to manufacture.

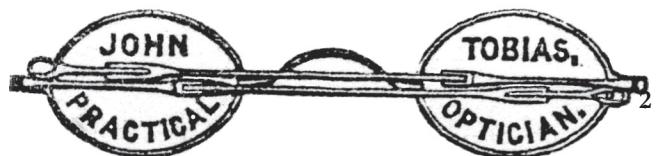
### Common Spectacle Lens Shapes

The most visible characteristic of a pair of spectacles is the shape of the lens, this surrounded by the eye wire. The eye wire has an inside channel or groove to accommodate the edge of the lenses. The outside of the eye wire could be rounded or flat. Three lens shapes made up the overwhelming preponderance of spectacle frames during this period:

**1. Oval shaped spectacles.** From about 1810 through approximately 1830, the great majority of all spectacles used in America for vision correction had oval lenses. Styles rapidly changed during the 1830's and by the end of the decade the sale of oblong and octagon shaped spectacles far exceeded that of oval spectacles. This remained so until the 1850's when oval spectacles began to come back into vogue. Dr. Henry W. Williams, writing in 1862, stated that, "At present and for some time the prevailing fashion – and a most sensible one – has been a large oval or approaching to an oval form."<sup>7</sup> According to Cincinnati optician Walter Alden, writing in 1866, spectacle purchasers in the South and West preferred oval spectacles to oblong or octagon spectacles.<sup>8</sup> (In Alden's view, the "West" referred to what we think of as the mid-western states, i.e. Ohio, Illinois, Indiana, Michigan, Wisconsin, etc.). The oval shaped spectacle predominated all other styles during the post Civil War period through the first World War.



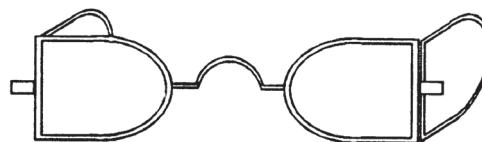
Oblong spectacles could vary in shape. These examples are illustrated in the same catalogue. (Source: James Queen & Company Catalogue of Optical Instruments, 1871, pp. 6-7).



Source: *Evening Star* [Washington, D.C.], October 20, 1856.

**2. Oblong shaped spectacles.** The oblong, or square shape became the most popular style by 1840, and remained popular through the 1860's. Illustrations in advertisements during this period use the oblong shape more than the oval or octagon shapes. Optician Walter Alden stated that the oblong and octagon styles were preferred to the oval styles in the East.<sup>8</sup> During the 1840's and 1850's, some examples of oblong shaped spectacles had sharper corners forming an almost true rectangle, as opposed to the more rounded corners of most examples. The use of oblong spectacles declined after the Civil War, largely replaced by ovals by the 1880's.

**3. Octagon shaped spectacles.** Advertisements in newspapers seeking the return of lost spectacles verify the use of octagon spectacles in this country by 1817. Merchants in Baltimore sold octagon spectacles by 1825. Based on surviving examples and



Typical D-frame style. These were often made with steel wire or silver.



Detail of CDV - Captain Thomas B. Griffith, 3rd Massachusetts Volunteer Infantry, wearing steel wire D-Frames. Griffith was discharged June 26, 1863. (Author's collection).



D-horseshoe spectacles in silver, with crank bridge and loop-slide temples. Marked "Pure Coin", denoting the use of coin silver for the frames. The owner probably hid an eye injury. (Author's collection).

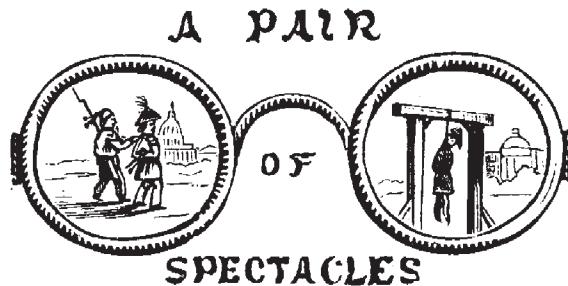
period photographs, octagon spectacles were more popular in America than in England or Europe. These tiny lenses were often derided as being too small, but they were still popular into the 1870's. American oculist James W. Powell wrote in 1847 that "the octagon shaped lenses that are so fashionable at present are certainly unnatural in shape; they are not at all to be recommended."<sup>9</sup> Oval spectacles gradually supplanted the octagon style by the 1880's.

Although not as common as the oval, oblong or octagon styles, five other eye wire shapes deserve mention. Two are closely related. The "D" and "D-horseshoe" shaped frames had four glasses arranged in a "wrap-around" configuration. Both styles were worn throughout the period and into the early 20<sup>th</sup> century. Makers of these spectacles used practically every variation of frame materials, temple styles, and optic combinations.

The four-glass "wrap around" type of spectacles was not limited to the "D" and "D-horseshoe" shaped glasses. Oval, oblong, and octagon spectacles all were available with four lenses or glasses instead of two – often called "double-eyed spectacles". The supplementary lenses swung to the side, like swinging a gate. These glasses had a variety of uses, depending on the intention of the manufacturer. Many were fitted with four flat colored glasses, to provide extra protection against light. Some four-lens spectacles served as bifocals - the front glasses worked for far sight with the supplementary lenses pivoted to the side. However, when swiveled inward on top of the front lenses, the superimposed optics converted these spectacles to close-up reading glasses. One unusual pair, when



Pantoscopic frames in gold, with crank bridge and band slide temples. Made by Lucius Moses, Indianapolis, Indiana, c1860.



J. D. arrives in Washington from the "Sunny South." | J. D. departs from Washington, for a warmer climate

S. C. Upham, 310 Chestnut Street.

Illustration from a Civil War patriotic envelope

the front and supplementary optics were superimposed, far-sight spectacles became a non-magnifying pair of colored glasses. At other times, the supplementary sides held no glass at all, but were instead had fine metal mesh, or fine green silk panels stretched on a frame, or solid panes of tortoiseshell - these combinations limited only by the imagination of the spectacle maker.

A style particularly popular in the Midwestern states were the pantoscopic spectacles. This "half-lens" design allowed the user needing spectacles only for reading or close-up work to look over the top of the frames. The glasses were tilted at an angle (rather than vertically) so that the user need simply to shift their gaze downward to read books or examine documents. Pantoscopic frames replaced an earlier style known as pulpit or clerical spectacles. Both pulpit and pantoscopic styles were forerunners of today's modern "half-eye."

Finally, round lenses deserve mention. Despite the efforts of well-known English optician John Harrison Curtis that encouraged the general use of round lenses, they were rarely used in this country from around 1820 until the early 20th century, thought to be heavy and unstylish. Exceptions were made for patients that required unusually thick lenses and for some types of protective eyewear.

Anyone could, and often did, have older pairs of spectacle frames refitted with updated lenses. Period photographs prove that badly out-of-style spectacles continued in use for decades, especially by older Americans. This is still true today, although styles change more frequently than in the past. As for non-corrective colored lens spectacles, with no change of glass needed for optical reasons, an older pair of frames worked as well as a new pair, regardless of style considerations.

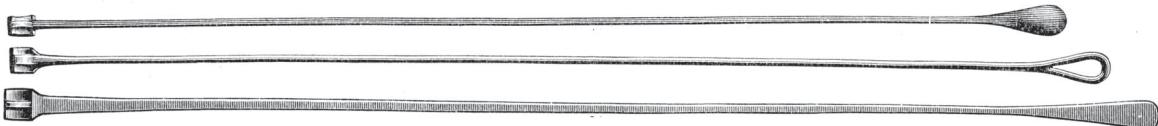
### Common Types of Spectacle Temples

All spectacle frames, as opposed to eye-glasses ("pince nez") are held to the face by the use of temples, also known as sidepieces, side bars or bows. Spectacle temples during the period are of four main types:

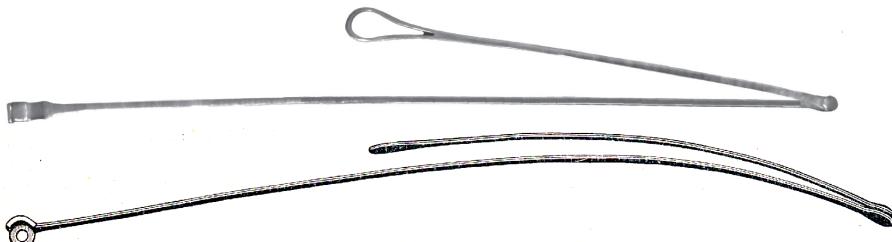
## Common Spectacle Temples on American-made Spectacle Frames 1830 - 1870



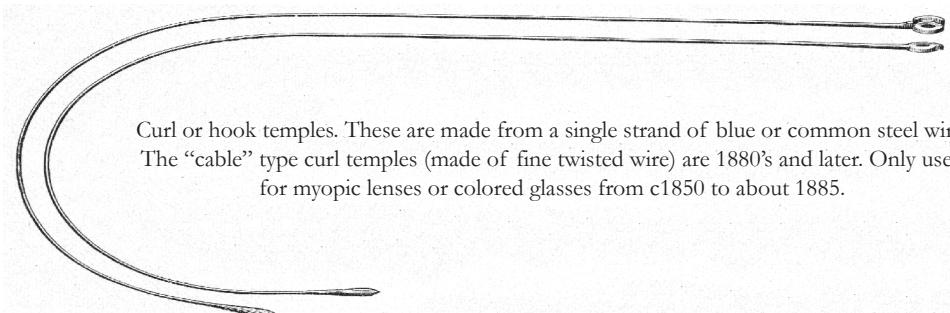
Sliding temples: top - loop slide or Jack Downing (J. D) slide. Appeared c1835; middle - band slide. In use by 1830; bottom - wide or broad slide (modern collectors call these “pin-in-slot” or “tab-in-slot”). These can vary greatly in actual width.



Ladies' or straight temple. Most Civil War and earlier examples have loops at the end.



Pivot or turn-pin temples. Often seen on blue steel or common steel wire spectacles.



Curl or hook temples. These are made from a single strand of blue or common steel wire. The “cable” type curl temples (made of fine twisted wire) are 1880’s and later. Only used for myopic lenses or colored glasses from c1850 to about 1885.

**1. Sliding temples.** These temples slide (or extend) to a longer length for wearing, and collapse to a shorter length for storage. There are three main styles of sliding temples:

- **the loop slide** (also called the “Jack Downing” or “J. D.” slide), this slide came into use between 1834 and 1837.<sup>10</sup>

- **the band slide**, this temple appeared by 1830.<sup>11</sup>

- **the “wide”, “stout” or “broad” sliding temple**, referred to as the “pin-in-slot slider” by modern collectors. (The “pin” is actually a rivet). In use by about 1800, spectacles with this style temple could be still purchased into the early 1870’s. Some were actually quite narrow, and some later versions would more properly termed a “tab-in-slot” sliding temple; a “tab” formed

from one end of the movable temple piece was bent up through the slot, replacing the rivet.

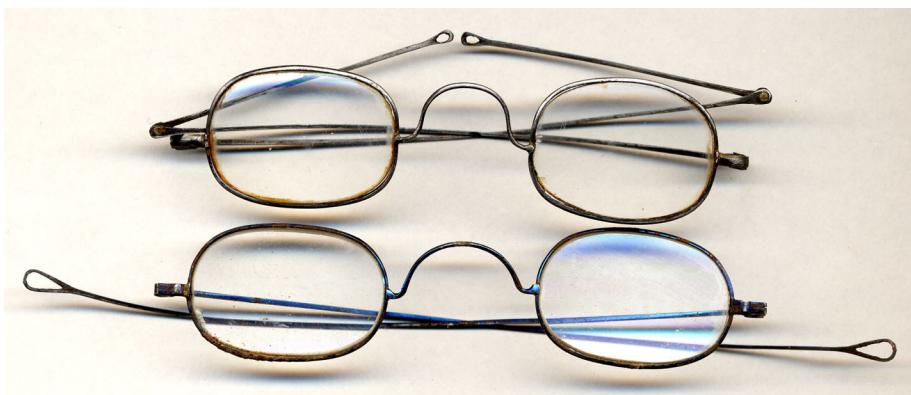
An uncommon temple variation has with one section sliding into the other, much like the tubes on a telescope or spyglass. These spectacle temples are patented – one patent being an “improvement” upon the first.<sup>11</sup> A limited number of the later patent were manufactured during or after 1860.

**2. Ladies’ temples** (also called single joint temples). These began to appear by the early 1830’s. Advertisements offered spectacles of a “light and convenient article, with single temples, for ladies’ wear”<sup>13</sup>, quickly called ladies’ spectacles. These had single straight temples that reached past the tops of the ears. Although referred to as “ladies’ spectacles” throughout the

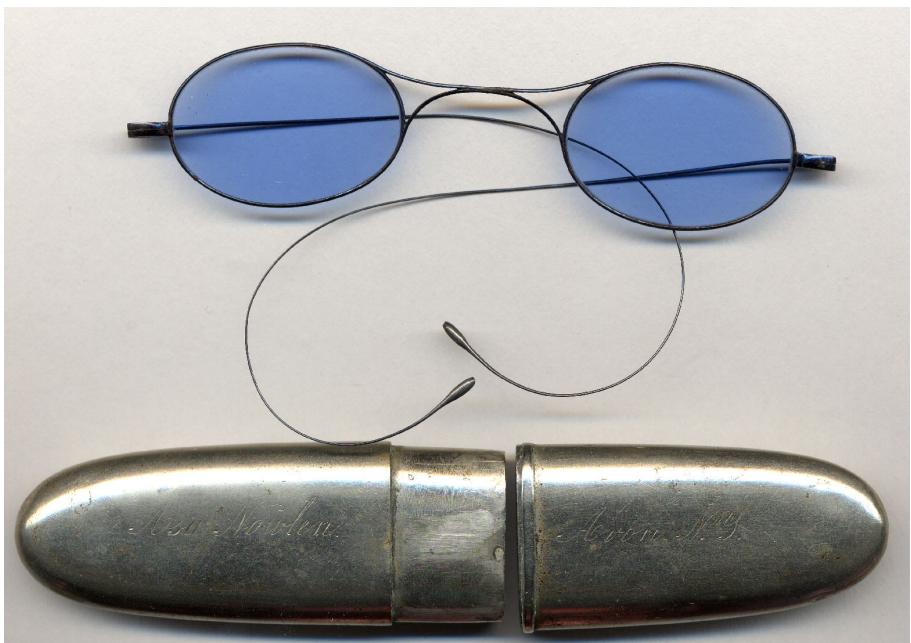
(continued on page 9)



Top: Green octagon silver spectacles, loop slides, crank bridge, by James Peters, Philadelphia. Bottom: Blue oval silver spectacles, band slides, scroll bridge, by Julius Rosendale, Philadelphia.



Typical steel wire spectacles c1850-1870



Riding temple spectacles (Invisibles). Blue glasses, made of fine blued steel wire.



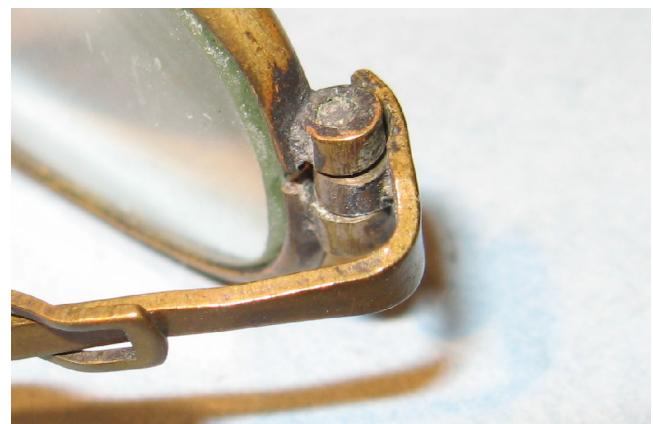
Gold ladies' spectacles. Oblong lenses, ladies temples. Red Morocco leather case.



Examples of inexpensive spectacles made of brass and German silver. Top: Oval German silver spectacles with loop slide temples. The joints are the most common type, using a screw to hold the joint halves together, and a separate pin for the temple pivot. Bottom: Oblong brass spectacles, German silver bridge and loop slide temples. This is the other common joint of the period. The single screw holds together the joint halves and also serves as the temple pivot.



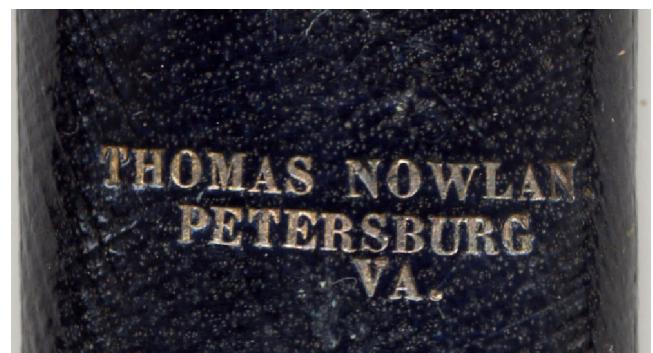
Close-up of the single pin joint found on inexpensive spectacles.



Same joint, from a different angle.



The most common type of spectacle joint, used for 150 years. A screw holds together the two halves of the joint. The temples are attached using a separate pin. This style of joint was used on silver, gold, steel, German silver and plated spectacles.



Some spectacle makers or retailers had their name and location stamped on their spectacle cases. Thomas Nowlan was a silversmith and jeweler located in Petersburg from 1848-1861. This case held an unmarked pair of silver octagon spectacles with band slide temples.

period, they were used by both sexes. The 1848 and 1856 catalogues of Benjamin Pike, Jr. said this type of temple had "single branches" and they were "convenient for ladies – not disturbing the hair; and for gentlemen requiring expedition in placing them on."<sup>14</sup>

**3. Pivot or turnpin temples.** Starting around the end of the 18th century, spectacles frames were made with pivoting temples. The popularity of this type of temple faded somewhat

after about 1820, and judging from surviving examples, were not as widely used in the United States as were sliding temples. The earlier examples were mounted on heavier frames of silver, brass, steel, horn, tortoiseshell, iron and occasionally gold. Pivot temples did, however, remain a popular choice on frames of thin steel or iron wire.

**4. Single wire curl or hook temples.** Curl temples were first used on a very specific type of spectacle frame available by

1850. These "invisibles" or "riding" spectacles had oval lenses, and were used by myopic (nearsighted) individuals. These were made of extremely fine steel wire, and there were grooves cut into the edges of the lenses to accommodate the eye wire frame. Today's modern semi-rimless "logo" styles use this same technique substituting nylon fishing line for fine wire. The curl (or hook) temples wrapped around the ears and firmly held the glasses close to the eyes. Although curl temples became very widely used in the latter part of the nineteenth century on all types of spectacle frames, only an extremely small number of these are Civil War period or earlier.

**ESTABLISHED IN 1796.**

**McALLISTER & BROTHER,**  
**OPTICIANS,**

194 CHESTNUT STREET, PHILADELPHIA.  
(NEARLY OPPOSITE THE MASONIC HALL.)

The business of McALLISTER & BROTHER is a continuance and extension of the which was originally commenced by their grandfather, JOHN McALLISTER, Senior, in Market Street, about the year 1783, and which, in the year 1796, he established on Chestnut Street.

JOHN McALLISTER, Senior, ..... 1783 to 1811,  
JOHN McALLISTER & SON, ..... 1811 to 1830,  
JOHN McALLISTER, JR. & CO., ..... 1830 to 1836,  
McALLISTER, (W. Y.) & CO., ..... 1836 to 1853,  
And since May, 1853,  
WILLIAM Y. McALLISTER, { under the firm of McALLISTER  
and THOMAS H. McALLISTER, & BROTHER.

**SPECTACLES**

In Gold, Silver and Elastic Steel Frames, with Convex, Concave and Colored Glasses, or with Pebbles.

LADIES' PATTERN.

NARROW SLIDING—FOR GENTLEMEN.

BROAD SLIDING—FOR GENTLEMEN.

TURN-PIN SIDES—FOR GENTLEMEN.

HALF ROUND, OR PULPIT SPECTACLES.

**Spectacles of our manufacture are furnished with glasses of the first quality, and particular attention is given as to the focus best adapted to the sight of the wearer. Great injury often results from an injudicious selection of glasses, or from the use of those of inferior quality.**

In order that persons at a distance may be properly suited, they are requested to send a glass, or a piece of the glass, from the spectacles they wore last, and also to state how long since older glasses have been needed. *The age alone does not afford a sufficient rule for judging of the sight.*

Source: *Sight and Hearing, How Preserved, and How Lost*, by J. Henry Clark, Scribner, 1856

### Spectacles in the Civil War

Low-ranking soldiers tended to be young - by one estimate, the average age of the Union army soldier was twenty-six, too young for most of these men to require the use of spectacles. Some soldiers however, had myopia, the medical term for nearsightedness. People with myopia see objects more clearly when they are close to the eye, while distant objects appear out-of-focus. By far the most common form of myopia, physiologic myopia, develops in children sometime between five and ten years of age and gradually progresses until the eye is fully grown.<sup>15</sup> Most myopic people require vision correction from an early age.

If we are fortunate to live long enough, we will eventually develop presbyopia, commonly known as old age sight, a natural part of the aging process of the eye in which the crystalline lens of the eye loses flexibility, causing difficulty focusing upon close objects. Presbyopia usually becomes noticeable in our early to mid forties.<sup>16</sup> We can safely assume that during the Civil War, or any other period, younger people affected with moderate to severe myopia would require spectacles to function normally, and many people over the age of forty, due to presbyopia, would require spectacles for reading and other close activities.

Individuals claiming service exemption became a real problem for military service. In fact,

claiming service exemption due to myopic sight became quite popular in the North during the Civil War, so popular that the Provost General changed the regulations so that myopic individuals were required to serve in the Invalid Corps.<sup>17</sup> A Pennsylvania newspaper noted, "Near sighted men, instead of finding themselves exempt, will observe that they are to be transferred to the Invalid Corps. Henceforth, spectacles and eye glasses will not be so popular."<sup>18</sup>

Even with myopia, some soldiers engaged in serious combat. George Whittemore, Jr. "was very near-sighted, and constantly used glasses." He enlisted as a private in the 1st Company of Massachusetts Sharpshooters. His promotion to sergeant occurred by the time he was killed at Antietam on September 17, 1862.<sup>19</sup> Private Mason, of the 7<sup>th</sup> Regiment New Hampshire Volunteers entered and beat his opponent in "friendlier combat", an impromptu boxing match in camp. The unit historian said that he "by daylight was rather short-sighted, having to wear glasses to aid him most of the time."<sup>20</sup>

The Union and Confederate armies did not issue many spectacles; they were almost entirely a privately purchased item. For

## SPECTACLES AND EYE GLASSES.

**GOODHUE & SON** have just received at the Spectacle Depot, 77 Westminster st.

**Gold Bowed Spectacles for Ladies.**

**Silver Bowed Spectacles for Ladies.**

**Steel Bowed Spectacles for Ladies.**

**Gold Spectacles, Slide Bows, for Gents.**

**Silver Spectacles, Slide Bows, for Gents.**

**Steel Spectacles, Turn Pin, for Gents.**

**Pulpit Spectacles.**

**Riding Spectacles.**

**Double Vision Spectacles.**

**Double Eyed Spectacles.**

**Railroad Spectacles.**

**Colored Spectacles, Green, Blue, London Smoke and Grey Goggles, Eye Protectors.**

**Shell Eye Glasses, convex and concave.**

**Horn Eye Glasses, " " "**

**Steel Eye Glasses, convex and concave.**

**India Rubber Eye Glasses, convex and concave.**

**Pearl and Inlaid Eye Glasses, convex and concave.**

**Silver Eye Glasses, convex and concave.**

**Gold Eye Glasses, convex and concave.**

**Glass Eye Glasses, with no frame, &c., &c., &c.**

**The above, with many varieties not mentioned, are offered wholesale and retail, on the most favorable terms.**

**GOODHUE & SON, Opticians, Spectacle Depot, Westminster st.**

Source: Providence Evening Press [Rhode Island], October 4, 1862



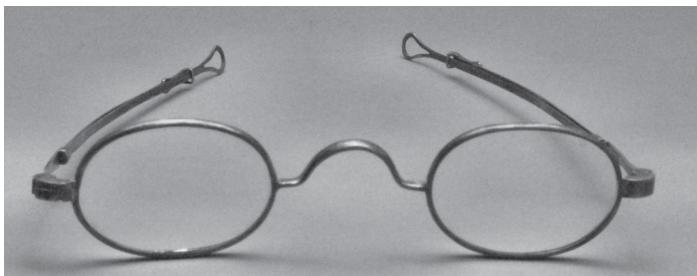
Detail of photograph - Gen. Quincy Gillmore's staff on Folly Island, S. C., 1863.

(Source: U. S. Army Heritage and Education Center).

example, The U.S. Sanitary Commission reported that during the War in the Valley of the Mississippi distributed only 20 pairs of spectacles - this in comparison to over 30,000 blankets and 150,000 cotton drawers.<sup>21</sup> As a second example, The Northwestern Sanitary Commission issued only 19 pairs.<sup>22</sup>

Spectacles were purchased by both officers and enlisted men. A regimental history notes that after a fight at Chickasaw Bayou on December 29, 1862, members of the Thirteenth Regiment of Illinois Volunteer Infantry saw their dead had been stripped of clothing articles by Confederates in need, but that personal effects had been carefully laid aside and not stolen: "There were watches, spectacles, knives, match-boxes, pipes, tobacco, handkerchiefs, packs of playing-cards, Bibles, combs, revolvers, and pictures" and many other items.<sup>23</sup>

Confederate C. Woodward Hutton, fighting with Hampton's Legion, wrote his parents describing his experiences at First Manassas: "...our men were subjected to a raking fire.



Oval spectacles of silver with band slide temples and crank bridge, made by William H. Calhoun, Nashville, Tennessee, c1855-1865. (Author's collection).

I was the first who fell. I had put on my spectacles, taken good aim & fired my first shot. As I was in the act of reloading, a rifle-ball struck me in the head, a little above the forehead; and the violence of the concussion felled me to the earth immediately. I drew off my spectacles & flung them aside.<sup>24</sup>

Naval troops also used spectacles. A well-known series of photographs of the officers taken onboard the U.S.S. *Monitor* shows two of the officers wearing spectacles. In fighting near Galveston on January 1, 1863, the United States Revenue Cutter *Harriet Lane* fell to Confederate troops. U.S. Commander Captain Jonathan Wainwright, according to newspaper accounts, was shot through the head with a pistol ball. One account reads, "He was wearing spectacles at the time, and the officer who was paroled took them to Commander Renshaw. One of the glasses was shot out, while the other was covered with blood and flesh."<sup>25</sup>

In North Carolina, Colonel J.F. Hoke commanded a regiment of Senior Reserves toward the end of the War. Writing the Commissary Department, perhaps tongue-in-cheek, he requested "six hundred pairs of spectacles and spectacle cases; four hundred walking canes, and three hundred and fifty bottles of 'Radway's Ready Relief' for the cure of rheumatism."<sup>26</sup> Fifty-eight year old Confederate Captain John Hinson "was an old deer hunter, and although wearing spectacles, greatly distinguished himself as a sharpshooter."<sup>27</sup>

A drummer in the Fortieth Regiment New York Volunteers (the "Mozart Regiment") constantly wore spectacles, and the men called him "Four Eyes" and "Glass Put In." The writer noted "Without his spectacles he couldn't see a barn door ten feet distance."<sup>28</sup>

At Petersburg early in March, 1865, a member of the Thirteenth Regiment of New Hampshire Volunteer Infantry recorded this amusing incident: "Recently while on picket, one dark night about midnight we were suddenly startled by a loud cry for help from the darkness in our front. Rushing to the spot with one of

our pickets we discovered a rebel deserter stuck fast in a swampy place. Reaching out his musket to us, by means of it we soon pulled him out of the mud hole and took him to our line. He was a man about sixty years old, and until forced into the rebel army had been a physician practicing his profession somewhere in North Carolina. He was enormously fat, he wore a wig and spectacles and false teeth, all of which he had lost in the mud hole, was covered with mud and dirt, and you can easily imagine what a ludicrous and pitiful spectacle he presented. After he had wiped the mud from his face and eyes and had blown it from his mouth, he drank a dish of coffee, drew a long breath, looked around upon the circle of our pickets and then proceeded in the most deliberate and solemn manner to deliver his opinion of the Confederacy." His assessment was not positive.<sup>29</sup> Historian James Kendall Hosmer recounted a personal experience that occurred in 1863, during a siege of an unnamed Confederate fort. In drawing a comparison between a Union soldier and a Confederate soldier that met during a short truce, the college graduate Northern man was described as "untrained by out-of-door sports, he never so much as slept in the open air; he wore spectacles."<sup>30</sup>

Many older officers used spectacles; General Lee used steel-rimmed spectacles at Appomattox<sup>31</sup>, and General John Pope wore glasses: "Pope is a thick-set man, of unpleasant expression, of about fifty years of age, average height, thick, bushy black whiskers, and wears spectacles."<sup>32</sup> Colonel (later General) Franz Sigel was another officer often described as wearing spectacles. "He wore spectacles, and kept looking around like a weasel."<sup>33</sup> At Wilson's Creek (August 10, 1861) he escaped from the field, being described as a "small reddish looking man with gold spectacles, a slouch grey felt hat, and a blue blanket worn poncho fashion."<sup>34</sup> At Pea Ridge, his spectacles were shot away, leaving him unharmed.<sup>35</sup>

General Meade constantly wore spectacles, as derisively noted in numerous accounts. One newspaper reporter wrote "He wears spectacles and is not considered a handsome man."<sup>36</sup> When an annoyed friend approached Meade with a problem, Meade replied, "Why, my dear General, you should not let that annoy you," and recalled an incident where his men



Burt & Willard patent spectacles, an unusual folding design. Abraham Lincoln had this pair in his pocket when murdered at Ford's Theater. Note the scroll bridge; this type of bridge became widely used after the Civil War. (Library of Congress).



Enlargement of a tintype group portrait of Company H, Third Arkansas State Troops. Note the soldier wearing colored glass spectacles, second row, second from right. (Source: National Park Service WICR#30057).

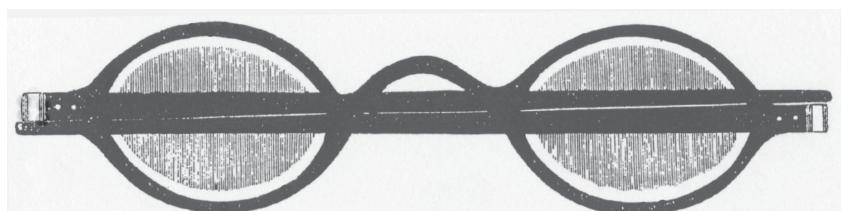
called him “a four-eyed son-of-a-bitch, and upon my soul, I could not get mad at them.”<sup>37</sup> Meade lost his spectacles in 1864 when “nearly surrounded” by Confederates, and “only barely escaped.”<sup>38</sup>

There is good evidence that soldiers in both armies used colored spectacles. A surgeon in the 77th Regiment New York Volunteers commented upon the general lack of uniformity in a division of Pennsylvania militia, stating that their lines contained “grave gentlemen in spectacles (and) studious young men in green glasses.”<sup>39</sup>

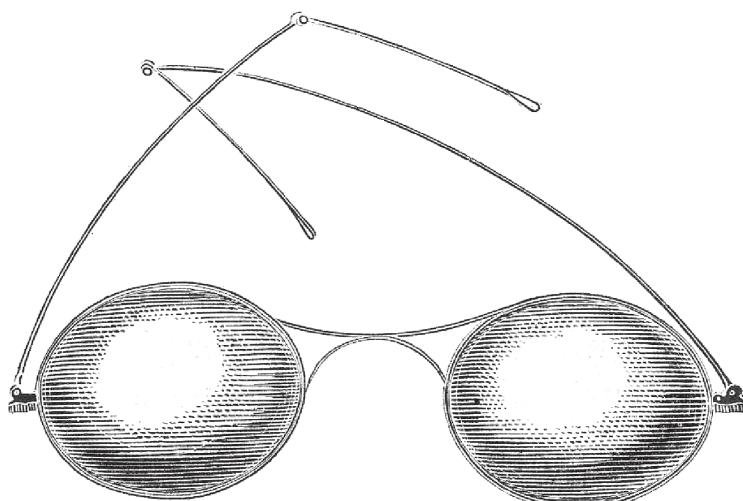
Colored lens spectacles with green, blue or smoked (gray or neutral) glass were readily and cheaply available from any optician or fancy hardware store. A letter written by John S. Mahony to Col. A. McMahan notes that at Chickamauga, a unknown officer with “colored spectacles” gave a command that resulted in the capture of his regiment.<sup>40</sup>

Ephraim Anderson wrote of Capt. Wade of St. Louis, the commander of a battery of Missouri artillery, describing him as “plain and unassuming; he usually wore a pair of green spectacles.”<sup>41</sup> Oculists, opticians and physicians often preferred one color over another when choosing among green, blue and smoked glasses. Most opticians and oculists had strong opinions about the best tint of glass for spectacles, and many

preferred the gray or “London smoke” glasses, since colors remained unaffected by the neutral tint. Norwich oculist Charles Carleton, on the other hand, stated that blue “is the proper color to be employed. Smoke-glasses should never be used, as they diminish the whole volume of light, and thereby render the image less distinct.”<sup>42</sup> Although green glass had been the preferred color of spectacle glasses, by the 1830’s written opinion turned toward to blue, and by the 1860’s to neutral gray as the colored glass of choice. A careful review of all known works written after 1845 by American oculists and opticians, and similar books written by American authors on the subject of manners and etiquette, found not one that recommended the use of green glass – “Frost’s Laws and By-Laws of American Society”, an 1869 book on etiquette, declares



Oval spectacles with ladies’ temples, made from tortoiseshell. These were going out of style by the 1860’s. (Source: *Catalogue of Optical, Mathematical and Philosophical Instruments*, Vol. 2, by Benjamin Pike, Jr., 1856).



Shell or Coquille Spectacles of steel wire with pivot temples. (Not to be confused with tortoiseshell frames). Many had ladies' temples, "very popular with the soldiery during their marches in the sun." (Source: *The Human Eye*, by Walter Alden, Cincinnati, 1866).



Typical Shell or Coquille spectacles with iron wire frames, K-bridge and ladies' temples. These had blue, gray and green glasses. (Author's collection).

"blue or smoke-colored glasses are the best; green glasses are detestable."<sup>43</sup>

We have read and heard claims that wearing certain colors of spectacle glasses treated particular diseases. It is true that persons with damaged eyesight often used colored glasses, but the use of specific colors to treat specific diseases was not done to any great extent. Going further, we have seen lists of different colored glasses and their uses in specific occupations. We have found nothing to support this claim, except in certain circumstances (i.e. very dark glasses used by metal smelters). It is a nice story, but primary sources of the 18th and 19th centuries do not back this claim. Colored glasses were used mainly as they are used today - for protection against the sun, although the term "sun glasses" had not come into use. (To be clear, occasionally the term "sun glasses" referred to lenses used to start fires; i.e. burning glasses).

A particular style of colored lens spectacles came into use during after 1850, and saw some use during the Civil War. These "Coquille" or "shell spectacles" had curved non-magnifying glasses shaped much like a watch crystal. The concave surface of the glass faced the eye and the convex surface bulged outward. Modern wrap-around sunglasses are

similar in using non-magnifying glasses with a deep curvature. According to Cincinnati optician Walter Alden (1866), "During the late rebellion, these coquille glasses became very popular with the soldiery during their marches in the sun."<sup>44</sup> Chicago oculist John Phillips (optician to Abraham Lincoln) confirmed this statement in his 1869 book about spectacles.<sup>45</sup> Most of these inexpensive imported spectacles were cheaply made of steel wire and most had blue or grey lenses.

### Spectacle cases

Most spectacle users kept their spectacles in a case, although some merchants claimed that spectacles fitted with highly scratch-resistant pebbles (quartz crystal lenses) did not need a case. There were two very common types of cases widely used during this period - leather cases with a closure flap at the open end, and metal flip-top cases with a hinged lid. The leather cases were usually made of Morocco leather dyed red, brown or black (and occasionally other colors) glued to a cardboard base. The flaps were held shut by a tab that fit under a sewn-on leather strap, or fit into a slit in the side of the case. Another style of case, called



Typical leather cases c1850-1860 (Author's collection).

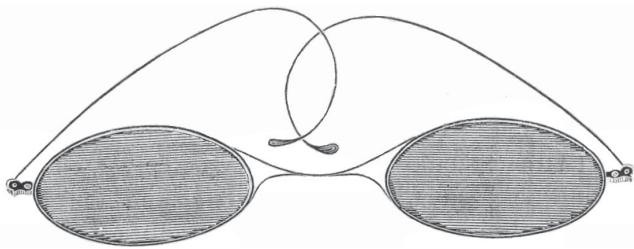
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Typical cases of the period 1850-1860. From the top: No. 1 and 2, red Morocco leather cases for ladies' spectacles. No. 2, same, for folding temple spectacles. No. 4 and 5, slider cases, spectacles slide in from one or both sides. No. 6, case for folding temple spectacles, red cut velvet with needlepoint decoration. No. 7, faux mahogany case, for ladies' spectacles.



Typical metal cases of the 1850-1870 period. From top: No. 1 through 4, German silver or tinned steel cases by the Charles Parker Company. No. 5, patented case, marked "J. L. Harlem, Pat. Sept. 20, 1864". No. 6 and 7, two-piece silver cases. No. 8, engraved silver case.



Riding bow spectacles, called Invisibles. Oval glasses with curl or hook temples and a "K" bridge. (Source: *The Human Eye, Its Use and Abuse*, by Walter Alden, 1866).

"sliders", consisted of a flattened leather slip-on case open at one or both ends.

Sometimes the maker or retailer would have their name and/or address and city stamped in gold lettering on the case, but most of these cases were unmarked. Most of the marked cases seen on the antique market (usually with an open end and no flap) are of post-Civil War manufacture.

Metal flip-top cases were durable and very popular. Many had a top that remained closed using only a tight fit and friction. In 1860 the Charles Parker Company of Meriden, Connecticut obtained rights to a patent issued to George N. Cummings. This patent consisted of a very simple closure tab that held the lid of the case tightly shut.<sup>46</sup> These cases became extremely popular, and marked examples are very common. It is not known exactly when Parker began the manufacture of these spectacle cases, although a history of American manufacture published in 1864 states that Parker's "plated spectacles, spectacle cases and tobacco boxes are made by patented machinery so expeditiously and cheaply that the

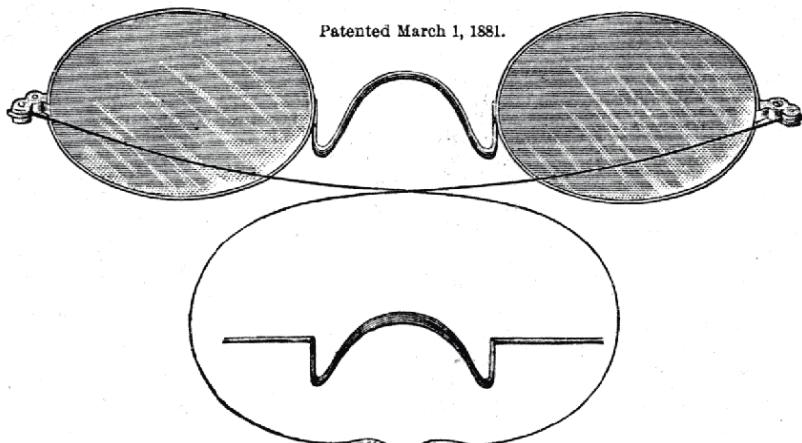
demand for them is extensive."<sup>47</sup> The 1865 "Illustrated Catalogue of American Hardware of the Russell and Erwin Manufacturing Company" offers both these cases and spectacles.<sup>48</sup> A later lawsuit failed to establish prior invention by another party - the transcript stating that similar metal cases were no longer salable due to the popularity of the Parker case.

As with spectacles, spectacle cases come in a vast variety of forms. There are two-piece pressed paper cases; there are handmade wooden cases; there are beautiful solid silver cases with the name of the owner or presentation information engraved on top. And, as with spectacles, there was a pronounced tendency to reuse older items. Old cases from a previous era were pressed into service.

Finally, there are some spectacle styles that are either mistaken or unproven to be of the period. First, spectacles with saddle or "W" bridges are undoubtedly post-War. There is some debate among researchers as to the inventor of the saddle bridge, but all claims regarding the years place first use of this invention over a decade after the end of the Civil War. See the illustrations to understand the construction of this bridge. Many spectacles using a saddle bridge have curl temples. Also, they are often mounted with larger lenses compared to Civil War period spectacle frames. Second, there are large numbers of an unusual type of spectacles sold as "Civil War shooting spectacles" or "sharpshooter glasses" on the antique market - indeed, probably more than the total number of sharpshooters in the War. Extensive searching in newspaper advertisements, optician books and publications, the Official Records of the War of the Rebellion, sharpshooter and

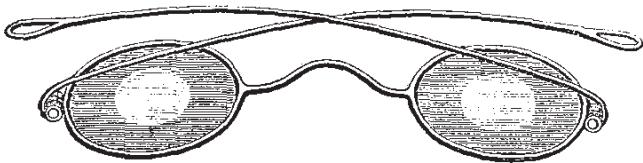
JAMES W. QUEEN & CO., PHILADELPHIA.

### THE SADDLE BRIDGE.



A spectacle frame should fit firmly in such a position on the face that there will be no danger of seeing either above or below, and as close to the eyes as possible, but not to touch the lashes, which if allowed to rub will soil and dim the glasses. To overcome this we have devised and patented the **Saddle Bridge**, represented in above cut. This bridge if carefully adjusted and fitted to the crest of the nose will overcome many of the troubles which have heretofore accompanied the wearing of spectacles.

The saddle bridge appeared after the Civil War, but antique dealers sometimes claim otherwise (Source: *Queen & Company Catalogue of Optical Instruments*, 1886).



Earliest known illustration of clear center shooting glasses. Manufactured by the Charles Parker Company. (Source: *Charles Parker's Illustrated Catalog of Domestic Hardware*, c1870-1872).

regimental histories, and many other books, documents and other sources during the last fifteen years have failed to establish the use of this style of glasses by soldiers during or before the Civil War. An inquiry made to the U.S. Army Heritage and Education Centre at the Army War College asked the curators to search their records - no evidence of Civil War use of shooting spectacles could be found. These types of spectacles, usually with orange glasses (occasionally with clear, grey or blue glasses) have a transparent center surrounded by translucent glass.

The idea to use orange glass in spectacles dates to a letter written in 1872 by Dr. J. H. Stearns, a surgeon at the Asylum for Disabled Soldiers in Milwaukee. Dr. Stearns wrote, "...why some optician has not had the genius to see that orange is the proper color for spectacles instead of green or blue for persons with weak eyes, is beyond my comprehension."<sup>49</sup> This comment, quickly reprinted, appears in numerous newspaper and magazine articles. No known optician advertisements prior to 1872 offered any type of orange tinted spectacles or spectacle glasses for sale, although many offer blue and green glasses.

It is not known exactly when the earliest "shooting spectacles" with clear centers were manufactured. The first



First Lieutenant Adam J. Slemmer, defender of Fort Pickens. (U. S. Army Heritage and Education Center).

known illustration of these clear-center shooting spectacles appears in an undated Charles Parker catalogue (although this catalogue can definitely be dated as being published between 1870 and 1872). The Spencer Optical Manufacturing Company catalogue dated July, 1874 also shows a drawing of these spectacles. Neither source mentions the color of the glasses. A comprehensive review of all known American optical catalogues printed before 1870 failed to find any illustrations of clear-center shooting spectacles, or any that offered orange glass spectacles of any type.

Out of many thousands of advertisements, there are but a very few and meager references to the terms "shooting spectacles" or "shooting glasses" before 1872. Philadelphia Optician Max Hilb advertised what he called "shooting spectacles" in 1851, "to be had of the inventor only."<sup>50</sup> An English "shooting spectacles" patent of 1861 had frames mounted with a hard rubber disk with a peek hole, so some advertisements may refer to imported examples of this type. Less than half-dozen advertisements mentioning the term "shooting spectacles" appear during the period from 1855 to 1869. Unfortunately, none of these pre-1870 advertisements, or any other primary source, describes or illustrates the pre-Civil war spectacles in question.

We believe all clear-center "shooting spectacles" or "sharpshooter glasses" sold by antique dealers are probably of post-War manufacture. They are so odd looking it seems someone would have mentioned their use. Some eyewear known as "shooting spectacles" were sold in extremely limited numbers before the War. However, we do not know what these spectacles looked like, and many of the commonly-found shooting spectacles with orange glasses and clear centers are clearly post-Civil War manufacture. By 1893, these orange glass "shooting spectacles" (the type widely offered on the antique market) became widely known and sold as "scenery spectacles", with thousands sold to tourists at the seashore or other scenic areas.

In summary, there are no known mentions in any primary source references of the use of "shooting spectacles" or "sharpshooter glasses" by any members of either army. The few "shooting spectacles" made prior to the Civil War are unknown description, and none have been positively identified by modern researchers.

There is often debate about the frequency of spectacle usage in the Union and Confederate armies, and with good reason – most soldiers did not wear them. However, soldiers in both the Confederate and Union armies did use spectacles. They did so for correction of presbyopia or myopia, or to protect their eyes against the sun or further damage by light. The spectacles had the specific characteristics as to lens shape, temple style, and construction materials as explained in this article. Persons who claim that Civil War soldiers did not use spectacles are mistaken, as documented above and in many other sources.

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All are members of the Ocular Heritage Society. Web site: [www.ocularheritagesociety.com](http://www.ocularheritagesociety.com).