

Strapping Helms in a Historical Manner

D.A.Biggs



From January 2000 until January 2001 The Metropolitan Museum of Art held an exhibition titled “European Helmets, 1450-1650.” On display were several Medieval and Renaissance helms from their collection. I found a copy of the official publication for the exhibition and purchased it to add to my library.

I was thumbing through the catalog when I noticed a peculiar thing: many of the helms on display weighed quite a bit less than the modern SCA equivalent. Specifically it caught my attention that combed morions, peaked morions, and burgonets were really pretty light! Most of them fall in the range of 2 – 5 lbs! In fact, only 14 helms (out of about 76) weighed more than 7 lbs. I thought about the standard SCA axiom “more mass absorbs the blow better” and wondered why helms that were actually built to withstand real (and mock) combat with steel weapons would ignore this rule.

Soon thereafter I had the opportunity to look at a helmet built and worn by Brian Price (Earl Brion Thonrbird ap Rhys). As an armorer he has researched not only the way the armor was built, but also the way it was worn and what was worn along with it. His helm was an eye-opener. (I’ll show it to you later in this article.) I began to realize that, like a modern soldier’s helmet or a construction hardhat, how the helm is padded and suspended plays a big role in how it actually works to protect the wearer’s head.

This led me on a small quest to find out how different helms were historically strapped and padded. This very informal paper you are reading will show historically accurate ways to suspend four types of helms. I’ll also write a few words about jousting helms. The padding and strapping shown here certainly aren’t the only ways to do it, but they are ways in which the armorers who made the pieces found that many examples were originally strapped.

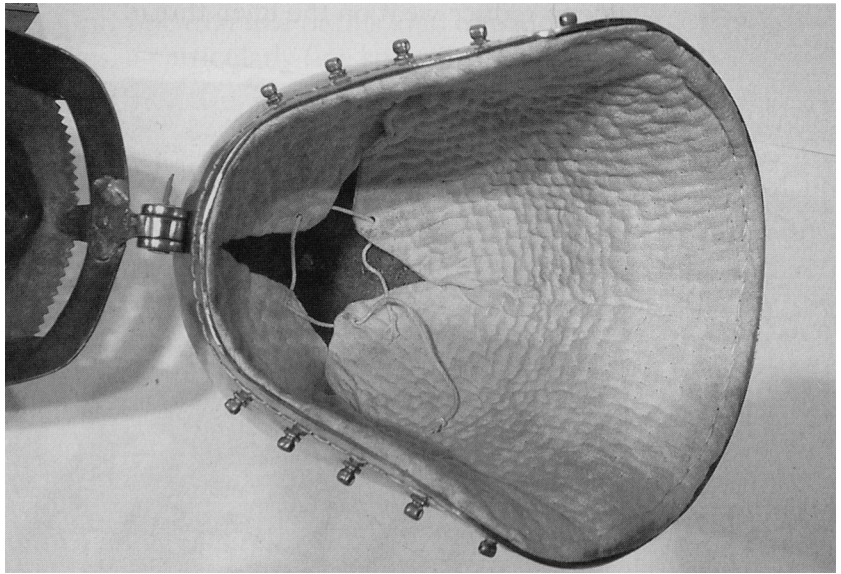
Most of my answers have come directly or indirectly from Brian Price. His excellent book *Techniques of Medieval Armour Reproduction* shows ways in which the bascinet and the chapel-de-fer were strapped. The research and work on the burgonet were done by Patrick Thaden from Dallas, Texas.

Disclaimer: Participation in any martial art or sport can be hazardous. The author of this paper can accept no responsibility if any reader decides to emulate any of these examples and ends up getting injured, anyway. While my own helm works well for me, it is up to each practitioner to be sure that his or her equipment is in good order and fits correctly, and that he or she is trained well enough and acting responsibly enough to avoid injury.



A bascinet

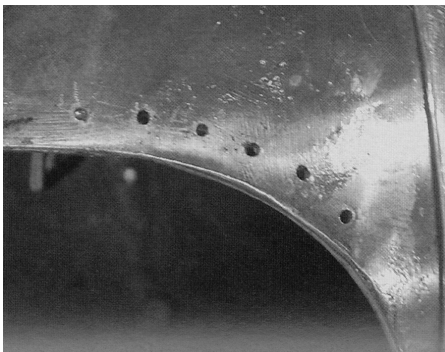
An excellent example of an historically lined and padded helm is the one made by Robert MacPherson (pictured right). This type of lining serves as both padding and suspension, suspending the helm off of the top of the head and allowing it to absorb shock much better than if it simply rested against the head. Helms should be made and strapped with enough space between the top of the skull and the metal itself to allow some “give” when the helmet is struck.



Bascinet by Robert MacPherson

With an eye toward heavy use in martial recreations, Brian Price padded his lining out a bit more than the Macpherson helm, but stayed with the same idea of lacing or riveting the lining to the bottom edge of the helm and running a cord through the top of the lining (see the MacPherson bascinet above) to adjust how high the helm sits on the head.

Brian punched or drilled holes around the edge of his bascinet so he can sew his lining into his helm with sturdy waxed thread, as shown below. This gives it the added benefit of being removable and, thus, washable.

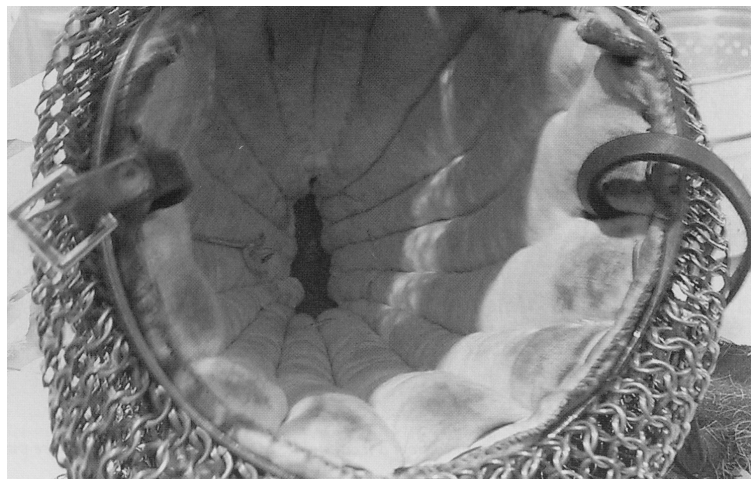


Holes for stitching the lining into the bascinet



The lining after it has been stitched into the helm

The figure to the right shows an interior view of the finished bascinet. For the padding itself, Brian used horsehair. He claims that wrapping the long hairs (mane or tail) around the wadded up short hairs - thereby creating a filled tube - gives the best results. He adds, however, that wadded up linen or cotton, or some other natural stuffing works well also. According to David Edge of the Wallace collection, all of the extant linings and suspensions are filled with raw cotton. Just be sure that the helm is padded enough for its intended use.



Interior view of the finished bascinet

A Chapel-De-Fer



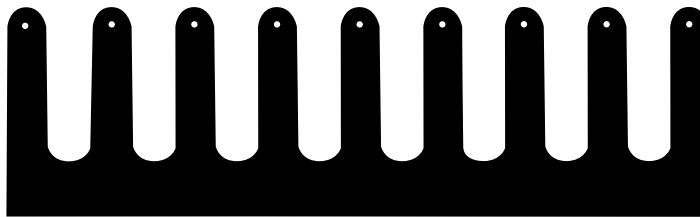
Chapel-de-fer by Brian Price

One of the projects in *Techniques of Medieval Armour Reproduction* details how to go about making a chapel-de-fer, which is a brimmed infantry helmet popular from the 12th through the 15th centuries. To the right is an example of a similar helm (called a Pikeman's Pot in the 16th century) from the Metropolitan Museum of Art in New York City.



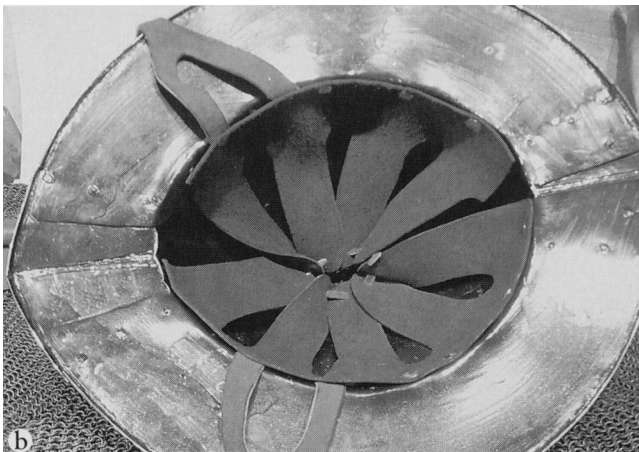
A pikeman's pot from the Metropolitan Museum of Art in NY

This type of helmet is probably the closest period equivalent to what we recognize today as a construction hard hat. The suspension for many hard hats, in fact, is very similar to that of the chapel Brian illustrates. To make the suspension, you make a pattern that fits the inside bottom edge of the crown of the helm that looks a lot like this:



Pattern for chapel-de-fer suspension

Each “finger” of the pattern has a hole punched through it in order to draw it tight once it is riveted in the helm, again allowing the wearer to adjust how high it sits on the head. Brian describes the assembly like this: “During assembly (of the Chapel’s brim to its crown) you can leave out every other rivet so that a leather band could be riveted into place, either to facilitate the sewing of a linen liner or the addition of a leather suspension harness.” He goes on to say “The chapel lining is cut from 5-6 ounce leather and riveted in place using the remaining rivets needed to hold the brim in place.” He also suggests that rivets be left off for the securing of a chinstrap.



Chapel-de-fer with a leather suspension harness attached

I am of the opinion that many peaked and combed morions (and other similar helms) were also strapped this way.



A Burgonet



Burgonet by Patrick Thaden

This burgonet by Patrick Thaden has a quilted linen lining that fits snugly from the forehead to about the base of the skull. The very front $\frac{1}{4}$ and the very back $\frac{1}{4}$ are sewn to bands of leather which are riveted to the helm at the back of the neck (see the figure below) and at the forehead, just under the visor.



Lining sewn to a band of leather at the back of the helm

I can say from experience that this quilted suspension works extremely well to absorb the force of both cuts to the side of the head and thrusts to the face. This type of suspension, however, is not particularly adjustable and is more difficult to remove because it is riveted in. The padding used was tow.



Interior view of lined burgonet



Another interior view of lined burgonet

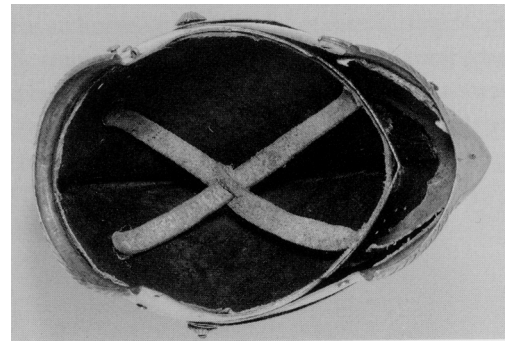
A Close-Helmet



A close helm from the Metropolitan Museum of Art in NY

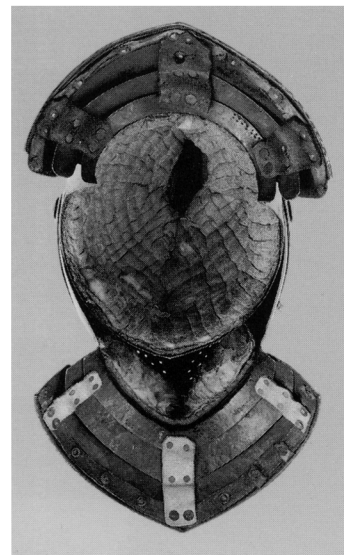
Close-helmets, and indeed many other types of helmets as well, sometimes have straps between the padded lining and the helm itself to aid with adjustments and to further support the head. The straps cross and intertwine in an “x” pattern and are adjustable by tightening or loosening the parts of the straps that protrude from the rear of the helm.

It has even been suggested to me that the rondel sometimes seen at the base of the close-helm was there to protect the adjustment straps from being severed during combat.



The x-strap in a close helm

Below is a rare close-helmet with its original lining intact. You can see the padding for the chin and the same basic adjustable shape as the lining in Brian Price’s bascinet. You can also get a good idea how thick the padding was.



A close helm from the Metropolitan Museum of Art in NY with the padded lining still attached

A Jousting helm

I don't know a whole lot about the martial sport of jousting, but I came across some images that specifically relate to this paper and just generally interested me. First I found a painting of three different views of a jousting helm that was designed (and illustrated) by Albrecht Durer some time in the late 15th or early 16th centuries. (This painting resides in the Musee du Louvre in Paris. I found it in the book *Arms and Armor* - published by the Cleveland Museum of Art.) Durer was good enough to include the detail of straps and ties that normally aren't seen in portraits.

When you compare this illustration with the padded coifs or hoods pictured below, you begin to see that the extremely padded hood was strapped and secured to the jousting helm, which was secured to the jouster's breastplate. The combatant's head was quite padded and mostly immobilized inside the helm.



Three views of a jousting helm by Durer



Three padded caps from the XXX museum in XXX

Summary

All of the helmets in this paper (excepting the jousting helm) have this in common: The lining or suspension is attached only to the base of the helm (or the base of the crown). Otherwise it is made to allow the helmet to “float,” as it were, over the head, not contacting it anywhere else. I can’t explain exactly what is happening when the helm absorbs blows, but I know this - when I’m wearing my burgonet, I can be hit in the face with one heck of a hard shot and, even though the tip of my nose was touching the perf plate, I am not bothered by the impact in the least (except the whole falling over backwards thing). The way the lining hugs my head and suspends the helmet allows for an incredible amount of force to be either absorbed or distributed around my face (forehead, chin, etc.).

The linen linings have this benefit as well: they are far more form-fitting than foam, they breath better (especially the ones with the adjustable tops like the bascinets at the beginning) and they absorb sweat well. Add that to the fact that, done right, they seem to better protect the wearer from head trauma than the standard close-cel foam padding and I’d say you’ve got a great reason to try it out and see what you think.

Bibliography

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The 14th Century

Brain R. Price