

W-T-Shields-art - 1/19/01

"War and Tourney Shields" by HL Aaron of the Black Mountains.

NOTE: See also the files: shields-msg, Shield-Balanc-art, p-armor-msg, Fightng-Small-art, armor-msg, armor-chklst-msg, tournaments-art.

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Thank you,
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WAR AND TOURNEY SHIELDS

by

HL Aaron of the Black Mountains



BEING AN OPINIONATED DISSERTATION ON THE TYPES, PROS AND CONS OF S.C.A. COMBAT SHIELDS.

BEING ALSO, A DISCOURSE OF INSTRUCTIONS FOR THE CREATION OF A PRACTICAL, BALANCED SHIELD FOR S.C.A. WAR AND TOURNEY COMBAT.

DEFINITION OF A SHIELD:

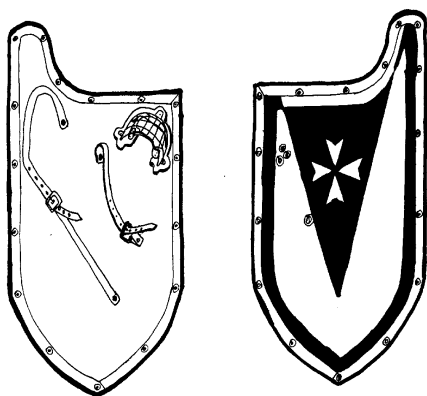
A shield is a flattened, large-ish, defensive device designed to be attached to the fighters off (non sword) arm.

Said device with which the fighter can, and should, block any and all blows that are aimed with deliberation or desperation at any portion of the fighters anatomy that would bleed/break/hurt a lot if the impacting sword was pointed/real/steel/sharp.

BASIC PHYSICS PRINCIPLE

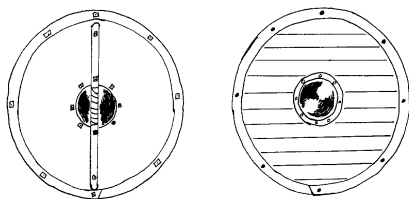
The shield must be heavy enough to absorb the energy from a blow without excess movement which would expose the fighter, but not so heavy as to be unwieldy or excessively slow. Shield weights will vary according to size and material.

Shields for S.C.A. combat are basically separated into two types,



WAR SHIELDS:

These are used at war, mostly in shield walls to provide a 'defenseable' position on an open war field. War shields usually cover the fighter from eyes to knees and from shoulder to shoulder.



TOURNAMENT SHIELDS:

These are usually used in 'one-on-one' combat. Because of this a 'sizeing' formula is used to ensure that each fighter has the same body area covered, and therefore no one person has a defense advantage over another. Tourney shields may be used at wars, but war shields are not permitted in tourneys.

***** OPINION ALERT *****

ALL SHIELDS SHOULD BE PAINTED WITH A SYMBOL OR PATTERN BASED AT LEAST ON ONES USED IN MEDIEVAL TIMES. BETTER YET, PAINT THE SHIELD WITH IT'S OWNER'S DEVICE OR COAT OF ARMS.

Depending upon which Kingdom you are a subject of, the fact of being armigious (having your Award of Arms more commonly known as an A.o.A.) will dictate wether or not you can legally paint your device onto your shield.

It may matter that your coat of arms or device haven't yet been either submitted and / or passed yet. So Tis better, by far, to be safe rather than sorry.

Check with a local Herald for your Kingdom's ruleing on using the device you've drawn on your shield if you are not armidious (Have an A.o A.)

My personal opinion though, is that a blank shield may indicate a 'lack of pride of self' and makes it difficult for other fighters and/or interested spectators to identify friend from foe on the tourney or war field.

TOURNEY SHIELDS:

Tournament shield size regulations for fighter's tourney shields can, and do, vary from kingdom to kingdom.

The type of shield allowed in Crown tourneys can also vary from kingdom to kingdom according to the reigning monarch's decree or whim, within the confines of the society Copora.

The most common shapes/types of tournament shields in use are:

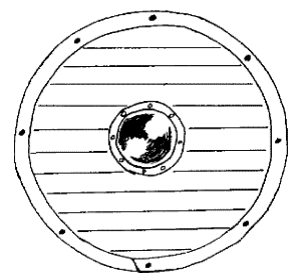


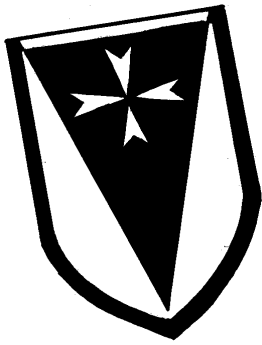
Round:

Round shields (used by all kingdoms and/or countries throughout our S.C.A. time frame: 650 AD to 1650 AD) these have both a hand grip and an arm strap and the leading edge is used to 'punch block' incoming blows.

Center Boss Round:

Next are shields (Norse) circa 900 AD these have a hand grip in the center of the shield covered by a 'dished' metal bowl and are presented flat face of the shield to the opponent. 'Center boss' shields are commonly measured from elbow to elbow when the closed fists are placed knuckle to knuckle or smaller.





Heater:

Shields are `hand iron' shaped (flat top, straight sides for two thirds of its length, at which point it curves to a point).

In the Kingdom of An Tir, heater shields are measured with the fighter sitting, in armor, erect in a chair. Chin to crotch is the measurement for length of shield, shoulder to shoulder for is the measurement for the width. The shield may be smaller if desired, but never bigger if used in tourney.

These methods of measurement insure that regardless of the fighter's physical size, every fighter will have the same amount of body area covered by their personally custom sized shield.

PROS: Everyone has the same body area covered. Tourney shields are lighter than war shields therefore faster to block incoming blows. Can be used for longer periods of time, due to lighter weight.

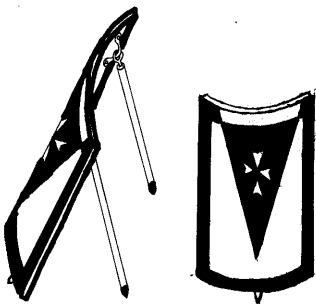
CONS: Smaller, therefore easier for your opponent to get around. Tend to wear out fairly quickly from constant pounding. In war situations, tend to get you killed due to smaller size.

WAR SHIELDS:

War shields have no size restrictions and are of many different shapes and materials. Materials range from curved plywood, flat ply wood, plastic, or metals. Sizes are usually measured to fit each individual fighter tastes. Width is usually from armored shoulder to armored shoulder, and length from eye slot to the knee, while standing upright in the `on guard' position.

Roman rectangular `Scutem'

These `center boss' shields have a hand grip only and are presented flat to the opponent. They too cover from eye slot to knee.



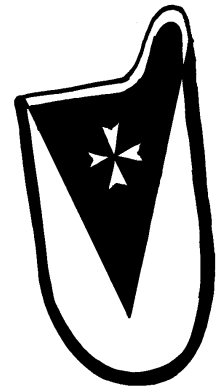
Pevoise

These shields covered two men during attacks on fortified positions. Attached brace poles on the back make this shield free standing. Not a personal shield, used mostly in castle siege or fortification assault situations by light fighters (Archers ect.).

Kite shields:

Kite shields were approximately four feet long and approximately 24" to 30" at the round top, tapering to a rounded point at the bottom.

These `kites' are usually strapped to the forearm and sometimes had a shoulder strap to carry some of the weight.



Horned War Shield:

Horned War Shield is another war shape that is popular. Reputed to have originated with the Polish `Winged Hussars' in the late Middle Ages. In common use at the Estrella war. The single horn on the shield side of the heater protects the head quite effectively. This shield is commonly hung on the arm the same as a `kite'. Size as large as you are willing to carry.

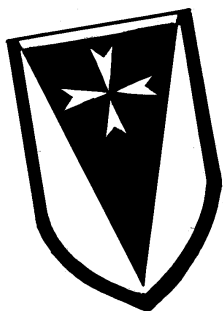
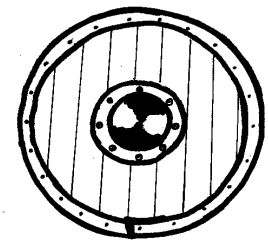


Round:

Round shields (used throughout our S.C.A. time frame) have both a hand grip and an arm strap and are used to `punch block' incoming blows. These are made of any size that you are willing/able to carry.

Center Boss Round:

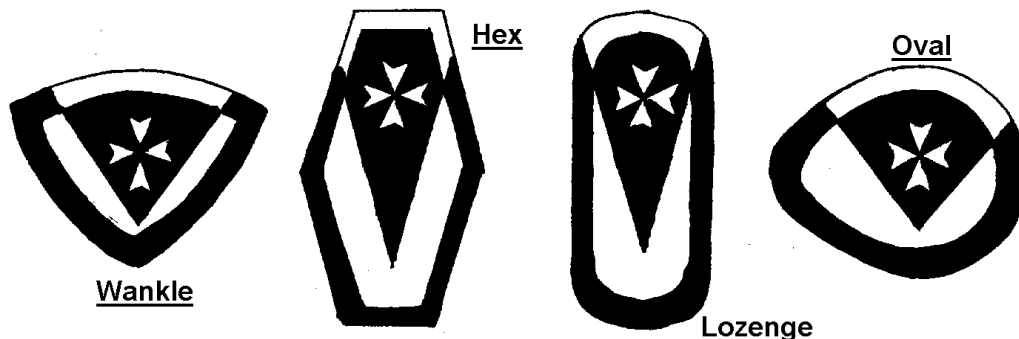
Center Boss Round shields are next (Most commonly known as `Norse' shields) circa 900 AD. These have a hand grip in the center of the shield, covered by a `dished' metal bowl, and are presented flat face of the shield to the opponent. Again they are of any size that you are able/willing to carry.



Heater:

Heater shields are `hand iron' shaped (flat top, straight sides for two thirds of its height at which point it curves to a point. As above, if you are willing to carry it, you can have it.

There have been other odd shaped shields used both in period years and SCA years. Here are a few that I've seen in my travels, either at war or tourney.



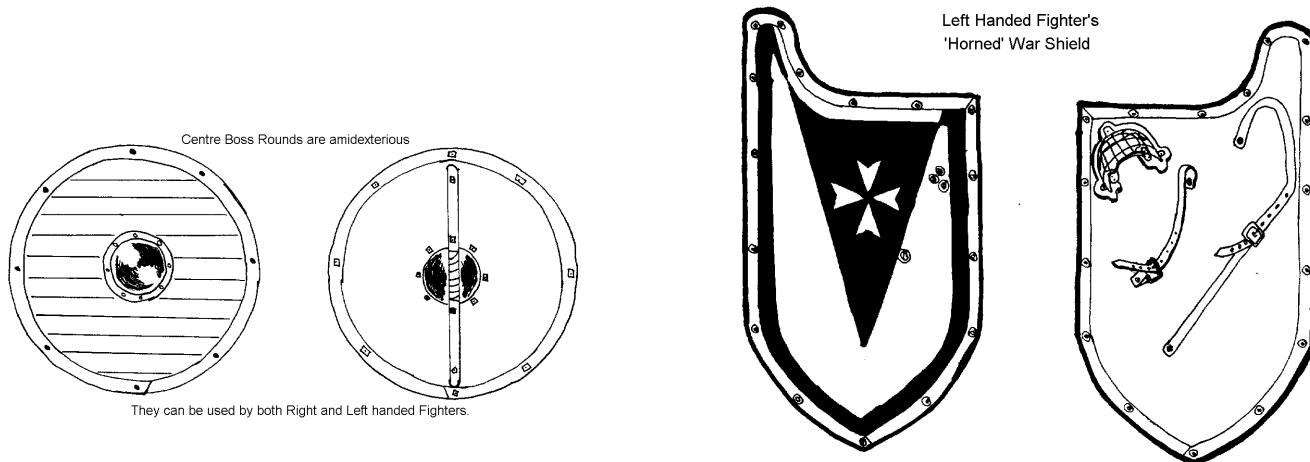
PROS: In a shield wall war shields are !!! BIG !!! therefore blocking most of what is being thrown at you, keeping you alive and the shield wall intact. War shields are most effective when interlocked in a shield wall and used along with a short mass weapon that has a thrusting tip. Eg; Mace, Single axe, Short sword.

CONS: War shields have one common fault, they are !!! BIG !!! If you lose your legs they are very unwieldy. They also slow you down when you must cover ground in a hurry. If you are unlucky enough to fall with the shield underneath you, it is almost impossible to get up or roll over when you are at the bottom of a pile of `dead' in a castle doorway.

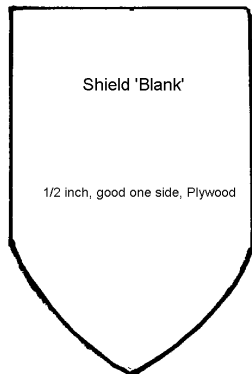
*****Warning*****

Check with your local Marshal and/or Kingdom armor regulations for your Kingdom's regulations on acceptable shield sizes before using the information in this article .

CONSTRUCTION OF A SHIELD



The following instructions apply equally to all sizes and shapes of shields, war and/or tourney. These instructions will enable the novice or advanced fighter to construct a shield that is light, strong and relatively long lasting.



The cut out shield shape is called a shield blank. The foundation of any shield is the material chosen for the blank.

Aluminium, Curved plywood, Good one side {1/2" thick} flat plywood, Plastic of various compositions (1/2 " thick) { cannot be 'see through' }

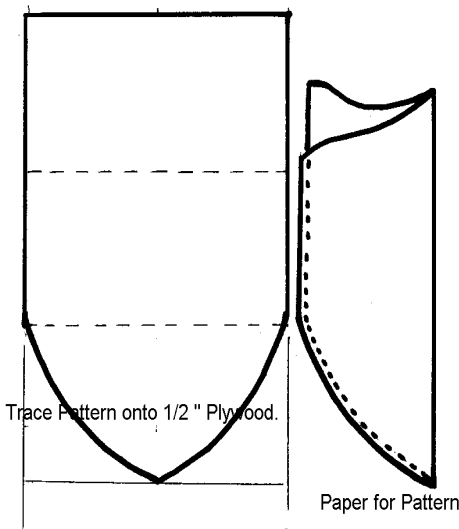
All of these have all been used and found acceptable.

To shape a 'heater' shield blank, cut the chosen material to the correct size using the 'chin to crotch, shoulder to shoulder' formula.

To achieve the bottom 'point' on the heater, take the rectangular piece that your 'chin to crotch, shoulder to shoulder' formula gives you and draw a center line on the back side of the blank. Then divide the blank into thirds.

Fold a sheet of paper (an old news paper works fine.) and place the folded paper on the blank with the fold on the centre line. Trace onto the paper the edge and the last '1/3' line from the blank. Draw a free hand curve from the fold to the bottom '1/3' line on the paper, then cut out the curve.

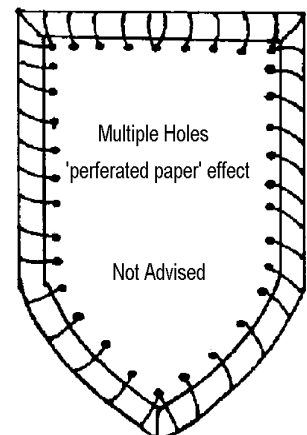
Unfold the paper and centre the fold on the centre line and trace the resulting curve onto the blank. Saw the blank into the final 'heater' shape.

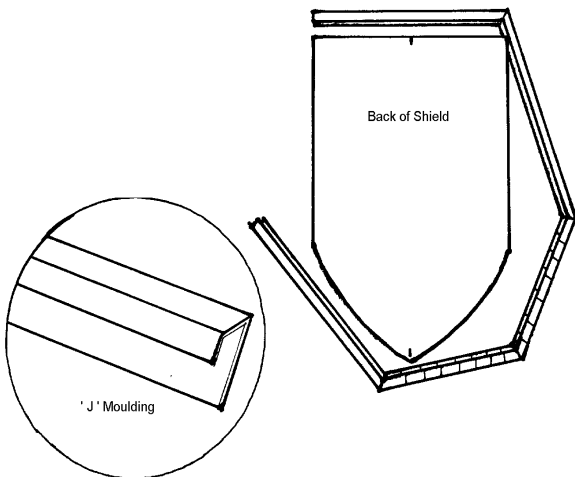


Save the corner pieces, they will make your 'Knuckle spacer' at a later stage of construction.

Edging the shield:

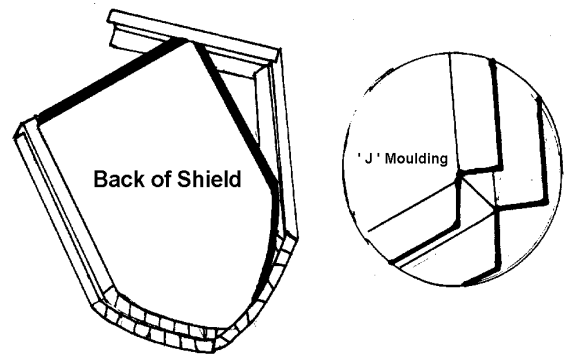
Common sense states that the more holes that are cut around the edge of a shield the more chance of the edge wearing out and/or splintering. Therefore it stands to reason that drilling multiple holes to 'lace' a tire or hose onto a shield edge weakens that edge. The use of bolts and washers at 8 inch intervals (more or less) eliminates this problem.





Now to attach the first protective edging to the shield blank. Any metal edging material will improve the life of the shield. However use of a lightweight, drywall 'J' strip moulding around the edge of the wooden shield blank will extend its 'life', is not too heavy, and is easy to cut with tin snips/shears. One, eight foot length of this lightweight drywall 'J' strip moulding is all that is needed to encircle most tourney shield blanks. 'J' moulding can be found at most local lumber yards at extremely low cost.

On a 'HEATER' shaped shield, starting even with the back top edge of the shield blank, clip on the 'J' strip with the longer leg of the 'J' on the back side of the blank. At each 90 degree corner one cut on each leg will enable the moulding to bend 90 degrees enabling the 'J' moulding to bend around the top leading edge corner, and clip onto the front leading edge. At the start of the bottom curve on the shield use tin snips to cut both legs of the 'J' strip at approximately two inch (2") intervals. This will enable the 'J' strip to conform to the curve. This will also apply to all round, oval or heater curves.



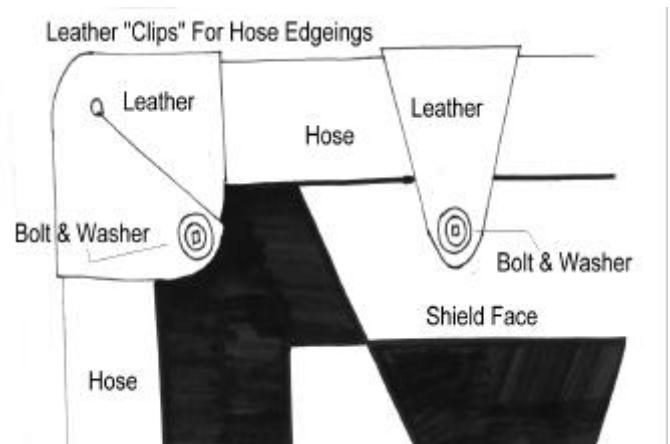
The next protective layer is whatever material you have decided to use to cover the metal edging.

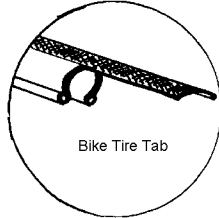
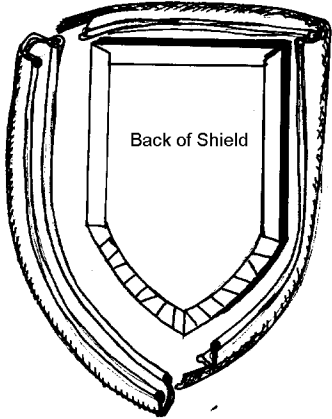
If rubber hydraulic hose is used, slit it open straight along one edge.

Clip the slit open hose around the perimeter of the shield. This kind of edging is held in place with short lengths of leather.

These must be long enough to go tightly around the hose and still have enough overlap to allow a round head stove bolt with two washers to be tightened through the leather and the shield.

(Again Robertson head bolts are best.) Corners are usually miter (45 degrees) cut and fastened down with an hourglass shaped piece of leather.





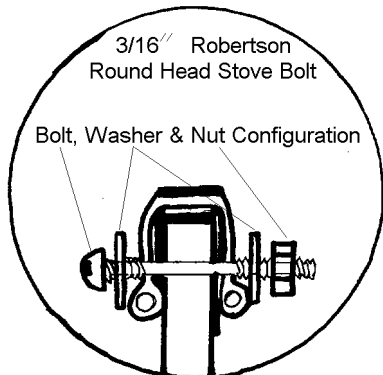
I personally prefer `used' 10 speed bicycle tire. {New 10 speed bike tires are not required. Check the dumpsters at your local bicycle repair shop. Ask first, its only polite.} Reasons are mostly cost. Used ten speed tires are very, very cheap (\$0.00).

Cut the tire so that the circle is broken. Trim away approximately 4 to 5 inches of sidewall from both sides of one end, leaving a strip of 4 or 5 inches of tire thread on that end.

On round shields overlap the thread strip and a square cut end at the rear or elbow point of the round.

On a heater shape, the joins are at the rear top angle and at the point of the heater. Be advised that heater shapes usually require two 10 speed tires.

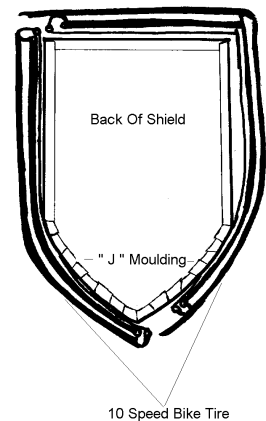
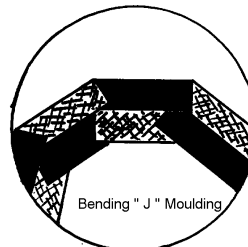
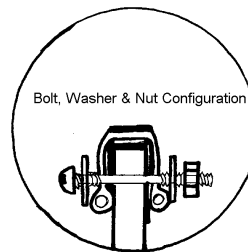
Save the extra tire length leftovers for sword \ weapon edge protectors. Be sure to cut off the wire strips from any tire used for weapon edging.

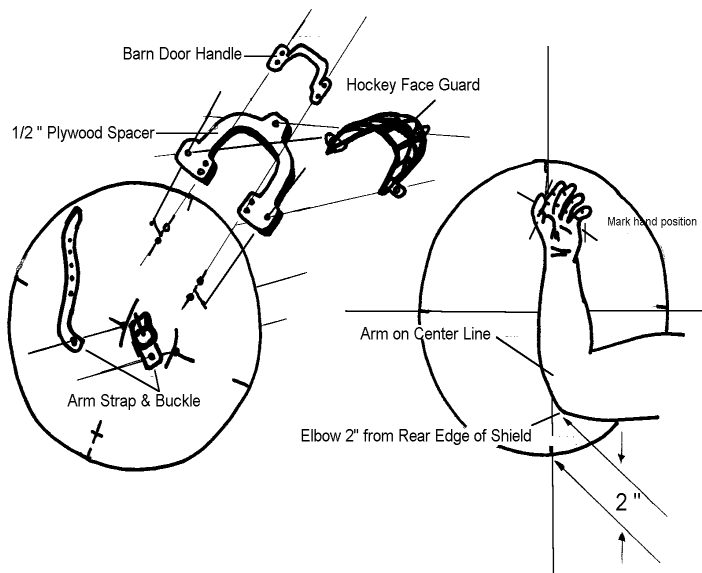


For all places where a bolt is required, It is recommended 3/16"x2" round head stove bolts with two washers per bolt. Robertson {square hole} round head bolts are what I have found to work best.

The protective combination of metal and tire/hose/rawhide edging is now fastened to the shield edge

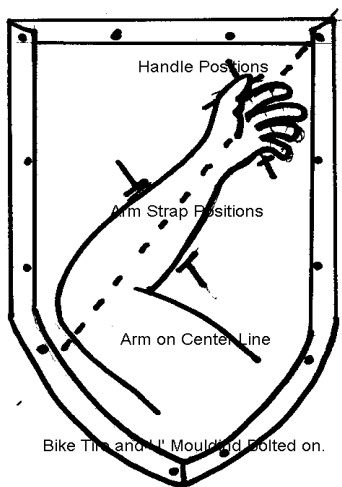
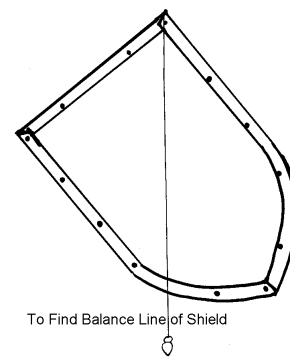
Press down on the bike tire wires. Keep the pressure on the tire and drill a 3/16" hole just above the wire and through the layers. With a washer on the bolt, insert it from the front of the shield. At the rear place the other washer on, then the nut, and screw down tight. Place bolts approximately 6 to 8 inches apart around the perimeter of the shield edging





Round shields have the hand grip, hand guard, and arm strap hardware installed on a 'diameter' line that begins at the tire join at the back or elbow edge of the round and bisects the shield to the front or leading edge.

If the shield is heater shaped, it has to be balanced. Suspend the shield by its leading edge's top corner. Drop a plumb bob line from the same point to the floor. (any string with a weight will do.)



Draw a pencil line along the string. Place your arm along (on) this line to balance the shield.

All that is left to do is to mark the hand grip position.

With your arm on the drawn line, and holding whatever hand grip you have chosen, have someone hold the shield against you in the 'on guard' position.

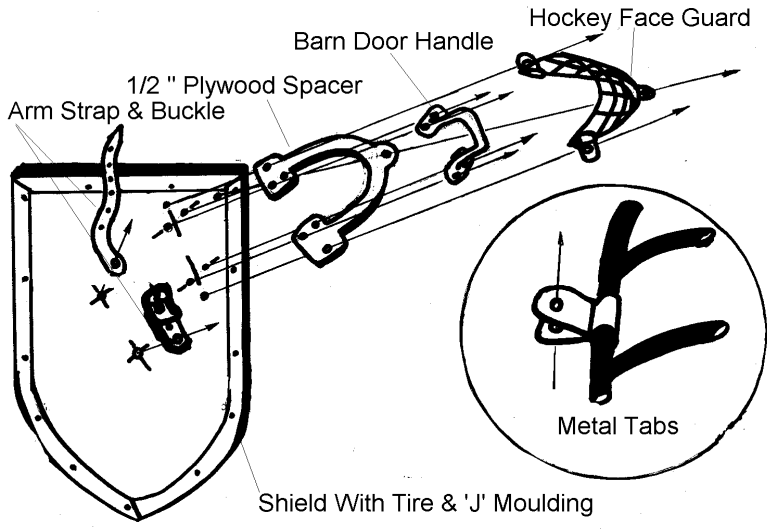
Have them raise or lower the shield until the top edge is where you can just see over the top edge.

Mark on each side of your clenched fist. {thumb side and little finger side} This is the position and angle for the handle.

If the knuckles of your hand touch the shield when you are holding the hand grip, you will lose both your grip and control of your shield.

Opponents love to face fighters who lose control of their shields. They are very easy to "kill." Besides it can be quite painful.

Any hand grip you devise (a 'barn-door handle, with knuckle clearance built up with washer/spacers are most common.) must have at least 1/4" or slightly higher clearance between your knuckles and the shield.



Now the handgrip guard (A hockey or lacrosse wire face guard are commonly used, however other manufactured hand guards of a rigid material are also acceptable. (18 gauge metal or `pickle barrel plastic) This guard is bolted down over the handgrip in a position that covers all the hand.

When holding the shield be sure that you do not let your thumb or fingers stick up through the wire guard.

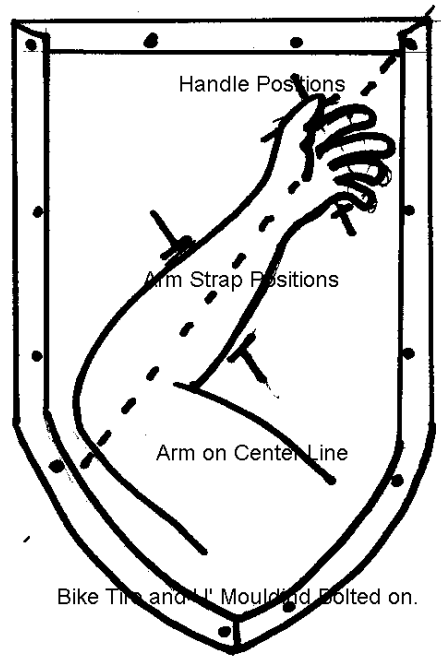
If the handgrip guard does take a blow, your finger or thumb will hurt a lot.

Last, but not least, the strap that holds your forearm in place. Two schools of thought govern this subject.

One; a **TIGHT** arm strap that holds your arm fixed firmly in place.

or

Two; a **LOOSE** strap that allows your arm to `float' so that a hand movement will move the shield.



In either case, (you have to decide between the TIGHT or the LOOSE) a one inch wide strap/buckle assembly with the short end attached to the buckle and the strap end an appropriate length to fit your armored arm is a workable width and length.

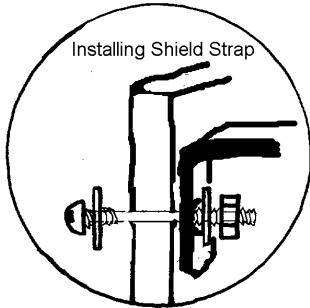
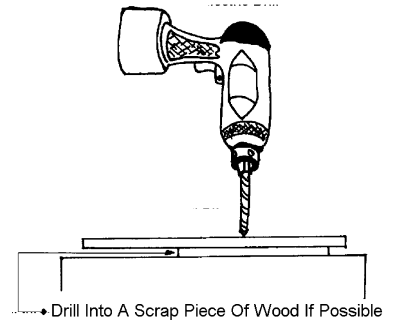
Hold the shield by the handgrip in the `on guard ' position. Ensure your armored forearm is centered on the `balance' line. Mark the back of the shield along the top and bottom of the forearm armor.

Place the strap end bolt hole of the buckle/strap assembly on the top line, just ahead of the elbow cop, so that the strap will not interfere with the movement/flexibility of the arm. Mark and drill for a 3/16"x 2" robertson head round head stove bolts with two washers per bolt.

The buckle end bolt hole is placed on a point, on a straight line drawn parallel to the hand grip, one inch below the point where the parallel line crosses the bottom arm armor line

Now mark and drill for a 3/16"x 2" round head stove bolts with two washers per bolt.

Electric Drill With A 3/16 th inch Drill Bit



With a washer on the bolt, insert it from the front of the shield. At the rear place the other washer on, then the nut, and screw down tight.

With the arm strap (whichever one you've chosen) in place your shield is now ready for use.

In conclusion this method of attaching the 10 speed bike tire edging, handle and straps will work to craft any style of shield you decide meets your needs. This type of construction has been 'play' tested for over 12 years and offers a reasonably long life shield for a fighters use.

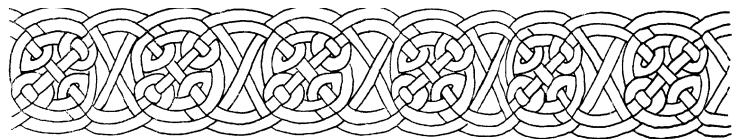
Again may I urge you to paint your shield in some fashion as blank shields on the field do not add much to the medieval feel of the event.

In Service,

Aaron of the Black Mountains

Northern Region Guildmaster, An Tir Armourers Guild

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***** Thank You's *****

This disertation was made possible, in large part, by the efforts of one particular gentle.

My sincere thanks to M'Lord Richard Bullock le Tigre of the Barony of Lions Gate for the many hours that he has spent scanning into my computer the graphics shown here in.

If, indeed a picture is worth a thousand words, then this honorable gentle has earned many thousands of thank you's from me.

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