Folders
Installing rattan

upholstery pliers

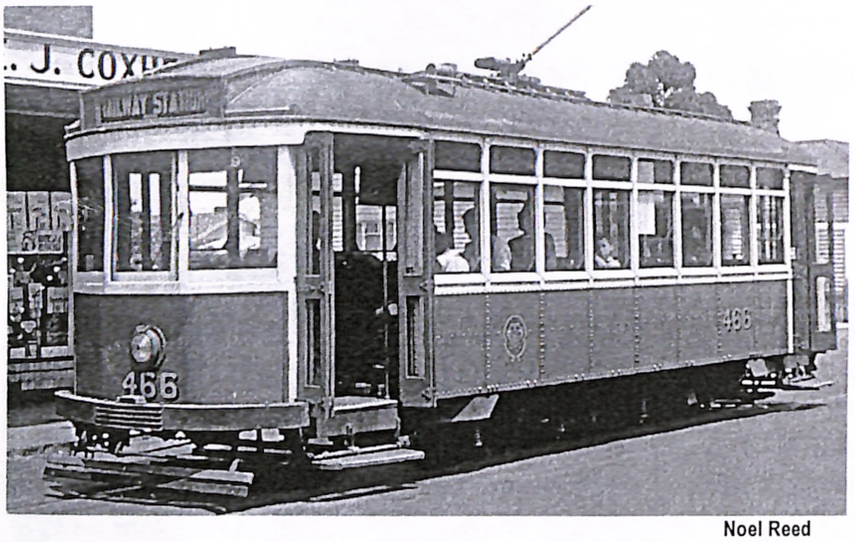
RESTORING BRILL WINNER SEATS

RESTORING THE SEAT FRAMES.

Select the best seat frames from stock available and dismantle.



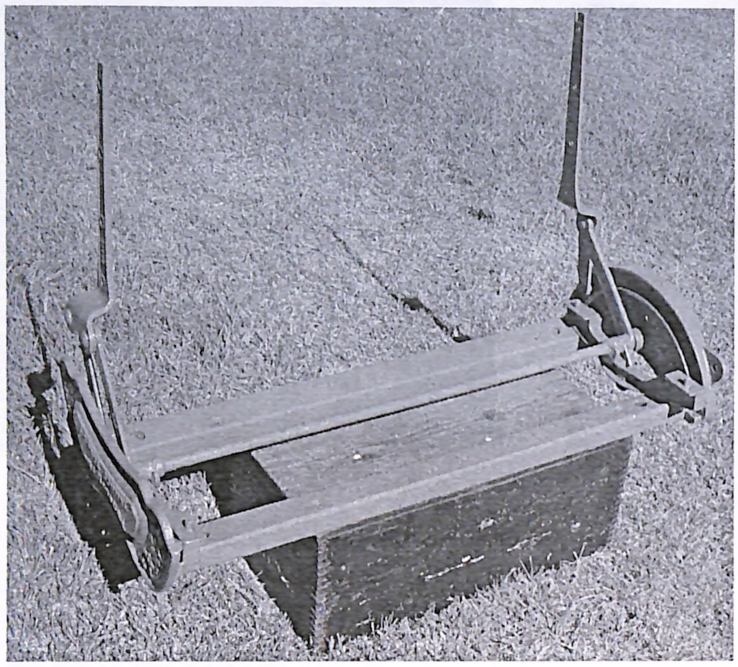
If the seats come from Melbourne X-1 cars, it is possible that they have been lightly welded up so that the front four seats faced the direction of travel and the rear four seats faced to the rear of the car. Break the welds with an angle grinder or bench grinder and gentle persuasion. It may be difficult to undo the wooden bearers that link the two side castings. RP7 or similar may be needed. At least one side must be removed to dismantle the parts. Note foot rails on seat nearest to the camera – see later



Noel Reed

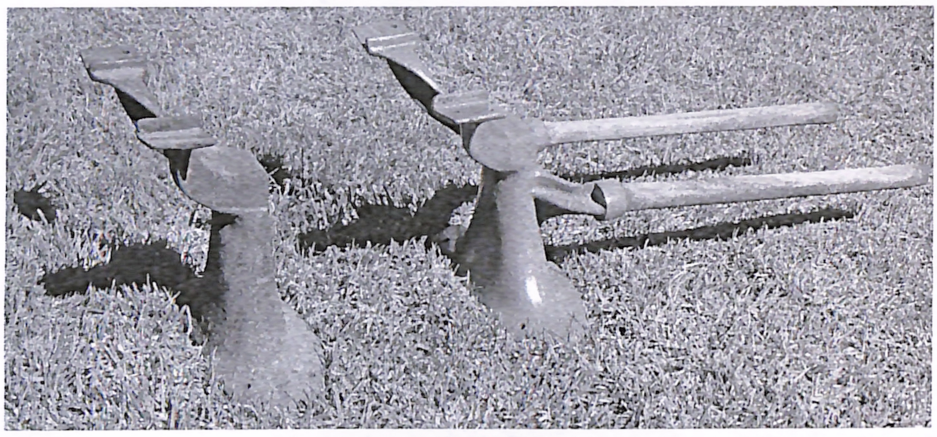
It appears that half the seats in some X-1 cars were fixed to face each direction.

Remove all deteriorated paint, free up bearings as necessary, metal prime and enamel, oil bearings, reassemble. The rails must be in the correct orientation.



Assembled seat frame without leg or foot rails

Note that the cast legs can be either of two types (one per seat). The outer side of the seat is screwed to the inner wall of the car. Some legs made provision for foot rails for passengers, the rails going to a small "U" shaped casting (not shown) screwed to the underside of the wooden seat base rails (used on Adelaide A and C type cars). Other types of legs did not have provision for foot rails (Melbourne cars).



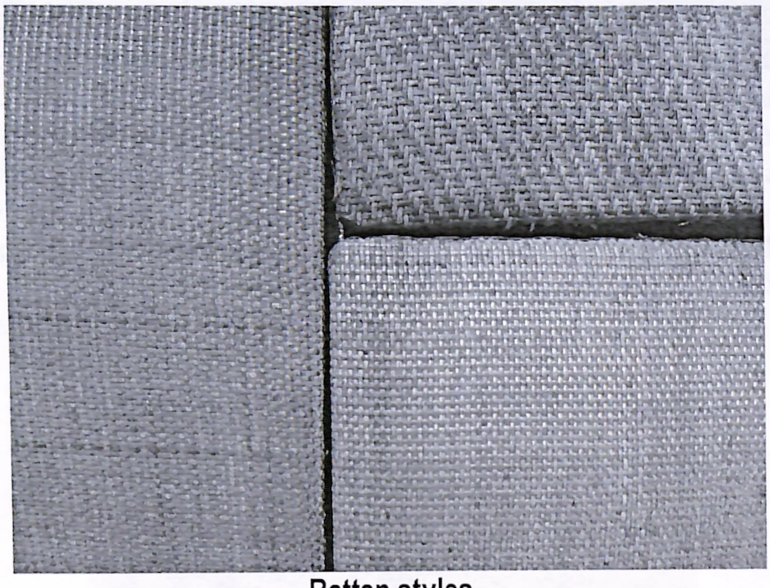
Legs from Melbourne cars (left) did not provide for foot rails, whereas legs from Adelaide cars did so (right).

RECOVERING OF RATTAN SEATS

The following pictures show the process of recovering rattan seats for Brill "Winner" seat cushions:

RATTAN STYLES

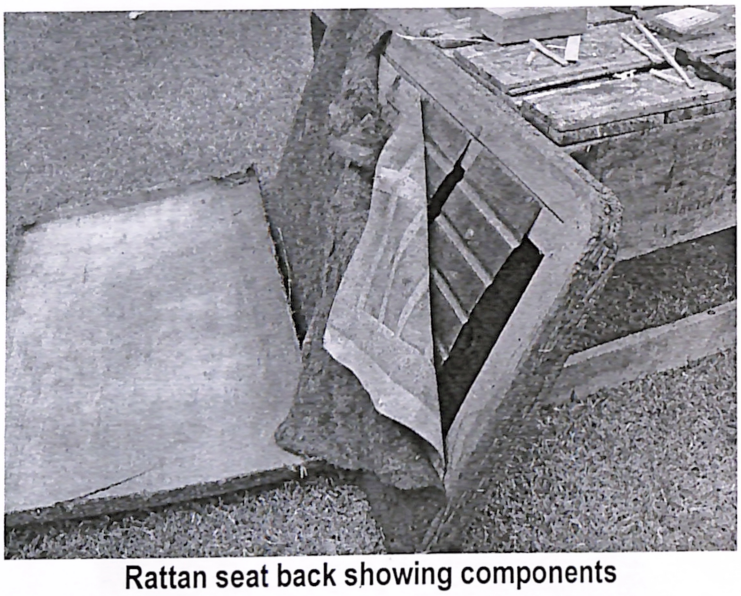
Rattan cones in a variety of patterns. It should be available locally in Capital Cities. The Adelaide source was Richard Bagley, Wicker-works Cane, 939 Marion Road, Mitchell Park, SA 5043, 08 8298 4244. "Close knit rattan webbing" has been used on AETM restorations (left side of illustration). Rolls cost over $200 per roll. Two rolls will do ten "Winner" seats. The "herringbone pattern" is available from China but requires a minimum order of 10 rolls. Some rattan had a cloth backing, but that appears to be unobtainable. Most old coverings did not have a cloth back.



Rattan styles

SEAT STRUCTURE

The structure of the original covering of a "Winner" seat back is shown below. The backs are double-sided. There is a set of coil springs between spring-steel strips (or to a set of laths in the case of seat bases.) The spring steel of the bases has strips of hessian on the surface of the metal, but this may not apply to the backs. This is covered by a cloth or light canvas sheeting, tacked down, with a layer of horsehair padding above it, usually full of dirt and dust, tacked about four places on the short sides and 5-6 on the long side to keep it in position. The padding is then covered with another layer of cloth. In this dismantled example, cloth-backed rattan had been used without an intermediate layer of cloth.



Rattan seat back showing components

RECOVERING OF SEATS

1. In the case of seat bases, remove the horizontal laths under the long edges. In the case of seat backs, remove brass handles and brass edge strips if still fitted, for future use.

2. Remove all coverings down to the spring steel. If the layer of cloth above the spring steel is in reasonable order and not torn or worn, and the spring steel is not rusted, leave it there.

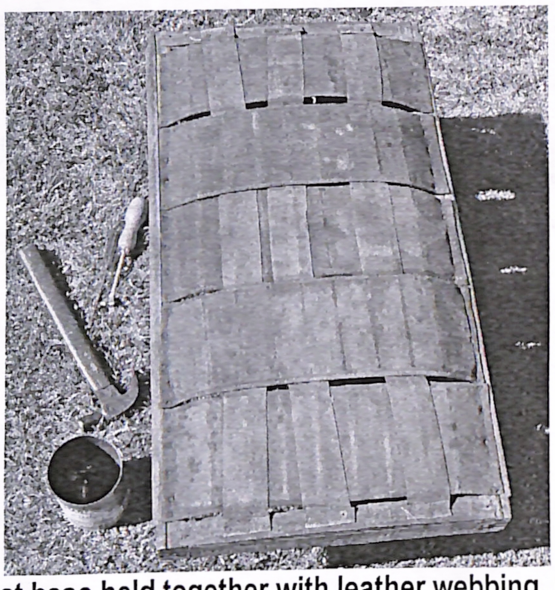
2. Remove all surplus tacks from the wooden seat frames. (Many may have remained from previous coverings.) Reglue the seat frames as necessary. Glue dowels into all screw holes in anticipating of redrilling the finished seats at time of installation. Check and clean hole for brass handle dowel.

3. If the seat cushions have been stored outside and become wet, the spring steel is likely to have rusted. Check for cracks on the springs near where the spring steel is nailed to the frame. If serious, try to replace with spare spring steel unit from another seat used for parts. If there are broken coil springs, replace them. As they are riveted to the spring steel, it is probably easier to position a replacement spring around the broken spring and attach with wire. In the case of seat base springs, the new spring can be attached to the cross-lath. Where there is significant rusting, consider painting the rusted surface with a phosphate etch-primer followed by metal primer paint as below.



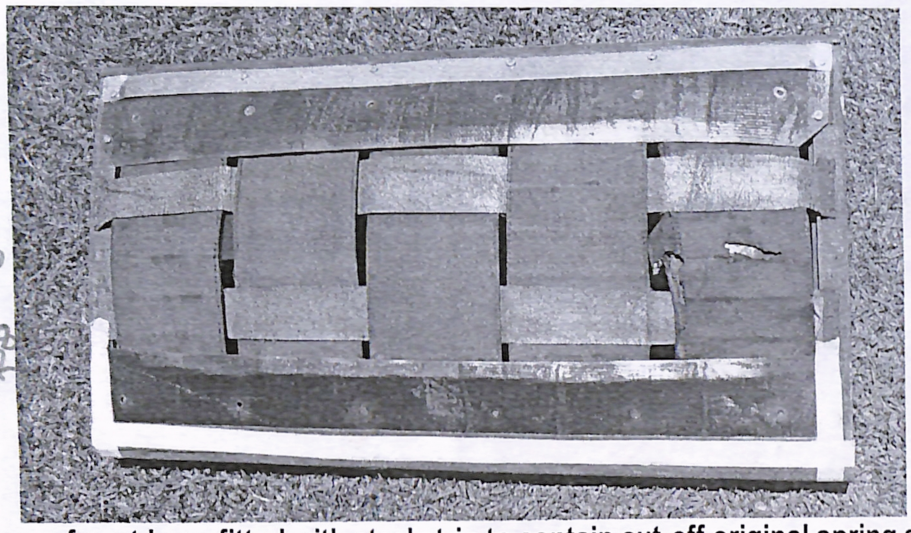
Applying phosphate treatment to rusted spring steel

If the seat cushion comes from a former M&MTB and/or SEC car, it is possible that the spring steel is no longer nailed to the wooden frame and the end where it was nailed has been cut off. (This may have been due to cracking of the spring steel when in use.) Replacement leather webbing covering and cross-linking all the springs may be found, with the webbing ends nailed to the wooden frame. The leather is almost certainly perished and the nails may well have pulled out



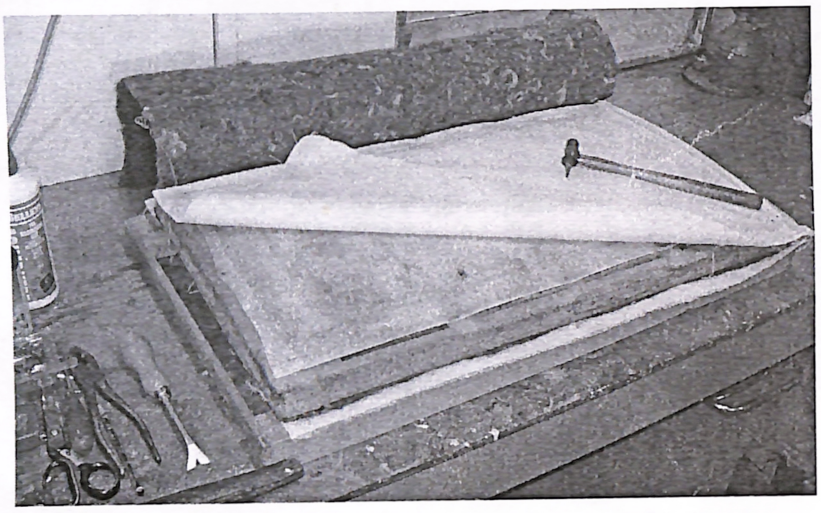
Ex-Melbourne seat base held together with leather webbing, now deteriorated

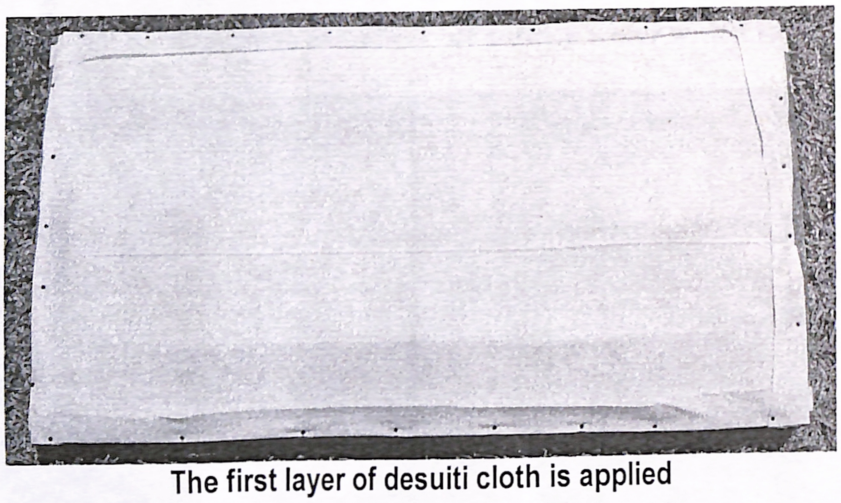
A steel strip can be screwed along the long edge of the seat on each side to hold down the cut-off ends of the spring steel which can still slide beneath the steel strip when being sat upon, thereby retaining spring flexibility. In the picture below, a piece of spring steel taken from an old sprung seat cushion from an Adelaide H car has been used. A piece of galvanised strip has been screwed down and through the new strip to hold it in position. Alternatively, a wide strip of galvanised metal (as sometimes used for lawn edging) can be used. Tap down all exposed edges and cover with tape,



Edges of seat base fitted with steel strip to contain cut-off original spring steel

4. Cover the steel springing with cloth. L204178-Deb Cotton L/State Desuiti, which comes in rolls 1900mm wide, is suitable. If the original covering is in good order, it can be left in position. The edges of the new material are turned back before tacking. 12mm blued tacks are suitable. (It would be possible and quicker, but non-authentic, to use a staple gun.) Work around the spring steel which approaches the edge of the wooden seat frame. Note the simple wooden bench support made for working with the convex seat backs.





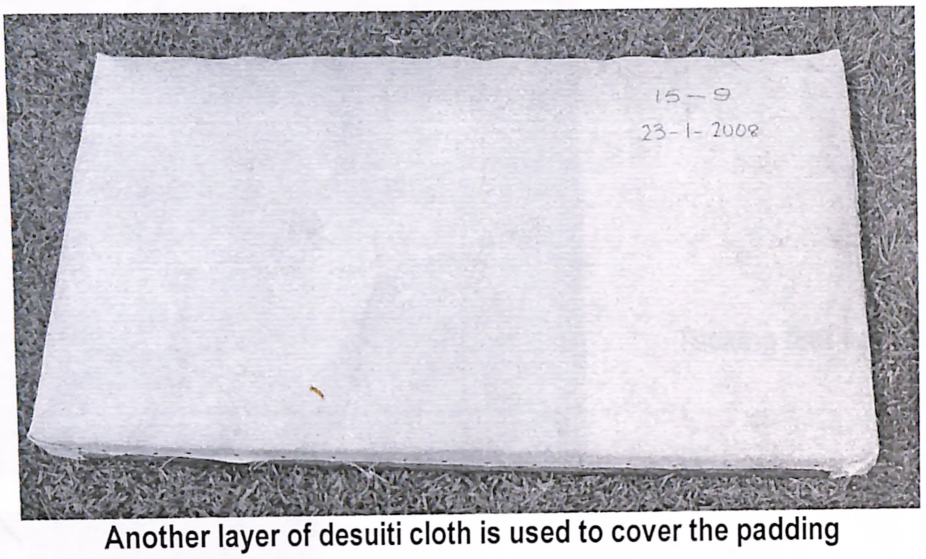
The first layer of desuiti cloth is applied

5. Next comes a layer of padding. If the old horsehair is in good condition, it may be able to be salvaged with considerable beating and vacuuming. It is probably easier to buy new material from a wholesale upholstery supply house. A very good set of upholstery scissors will made cutting of the padding easier. Tack the padding in position, using 16mm blued tacks.



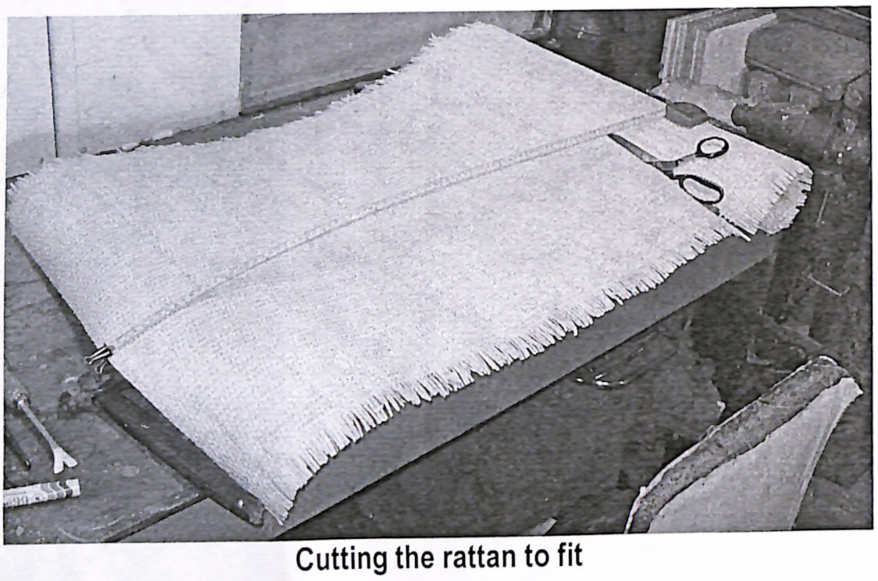
The padding is tacked into position

6. Tack another layer of Desuiti cloth over the padding, but this time tacking onto the side edges of the seat frame. Fold and trim at corners as appropriate to minimise bulk.



Another layer of desuiti cloth is used to cover the padding

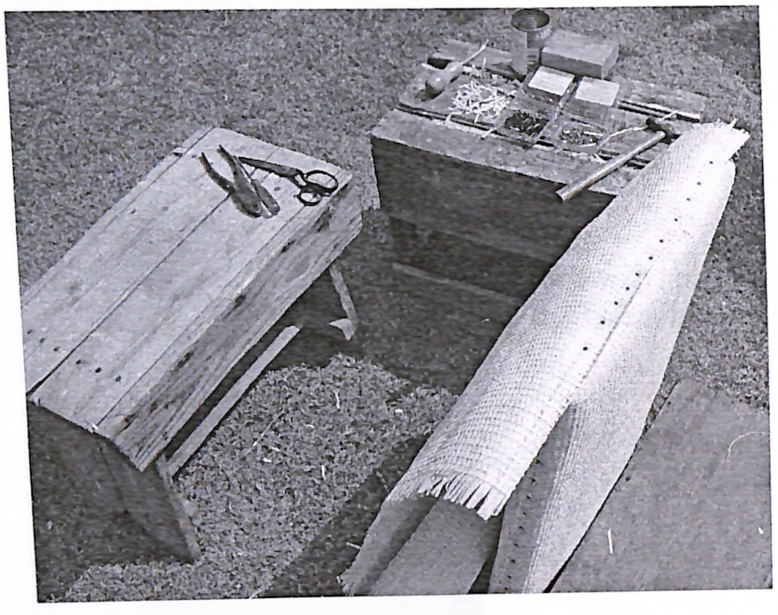
7. Next cut a length of rattan for the top covering. (Some suggested sizes are given in the table below, but check against the actual job.) Soak the rattan in water for one hour – a wheelbarrow full of water is convenient. Then remove and pat off surface water with a towel.



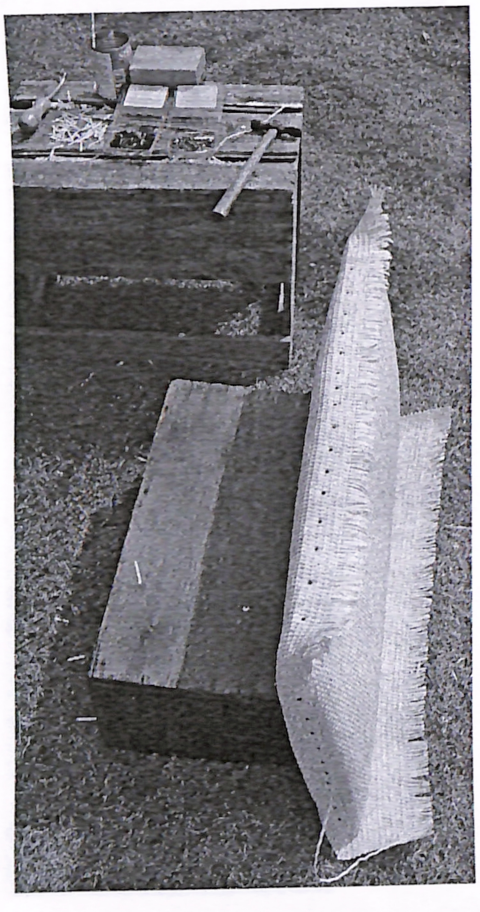
Cutting the rattan to fit

8. Tack the short sides first on the underside of seat bases and either the long or the short edges first on the seat backs, making sure the first side is located to give enough space to tack the other side. Use 16mm blued tacks, preferably nailed through the damp rattan rather than between the rattan strips. Try to make sure that the rattan warp and weft are kept straight and in line with the seat frame. If distorted, the appearance will be less satisfactory. It is not hard to get distortions. At the square corners, fold and tack so tacks are not visible from where the public are sitting. A few 20mm tacks are useful here. Light tapping of the damp rattan with a small hammer will assist placement, particularly on the round back corners. When doing the back, mark and make provision for the dowel of the brass handle. Tacks should be positioned so when covered by the brass seat strip, the tacks are not visible. On the underside of the bases, make provision for the steel dowels that are part of the cast seat base components and hold the seat in position. Trim as necessary after most tacking is completed.

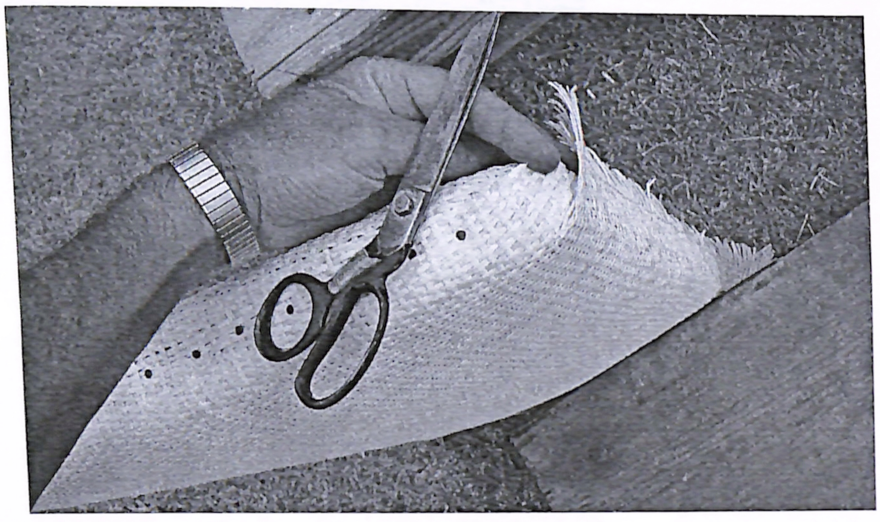
In the case of the backs, after trimming the first side, tack down the second side and trim as shown.



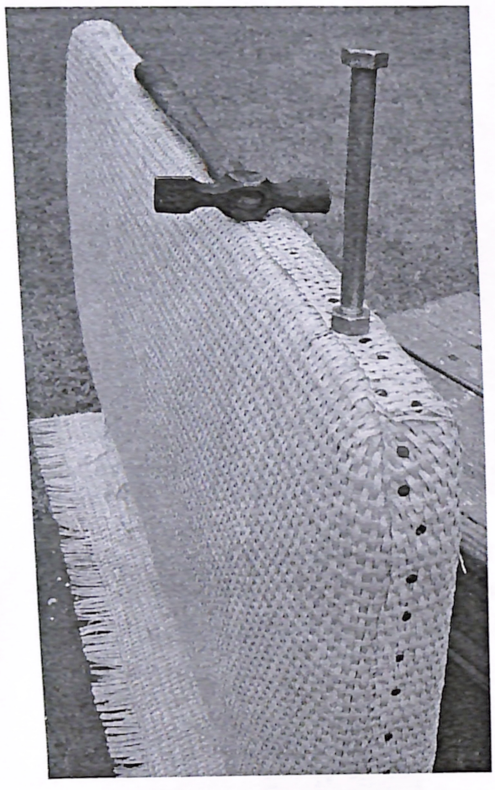
Tacking first edge of second side



Tacking short edges



Folding square corners after slight trim of internal bulk. Fold the outer piece back on itself to give a tidy finish without leaving snagging rattan ends.



Bolt with nut screwed up to make punch for brass handle dowel



Trim the edge so that the cut edge and subsequent cover strip (see below) will be hidden under brass finishing



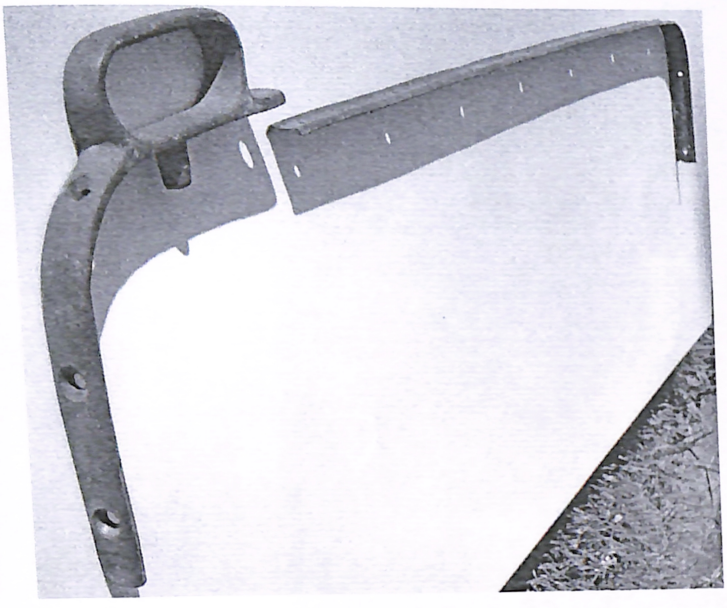
Cut a thin strip of leather cloth or vinyl and tack over the join area of seat backs

9. When dry, during which the rattan will shrink slightly and tighten up, give two coats of clear varnish. It may be slightly tinted with oak stain to give a more pleasing yellow hue as the new rattan is rather pale when varnished. Too many coats may increase the risk of the rattan cracking.

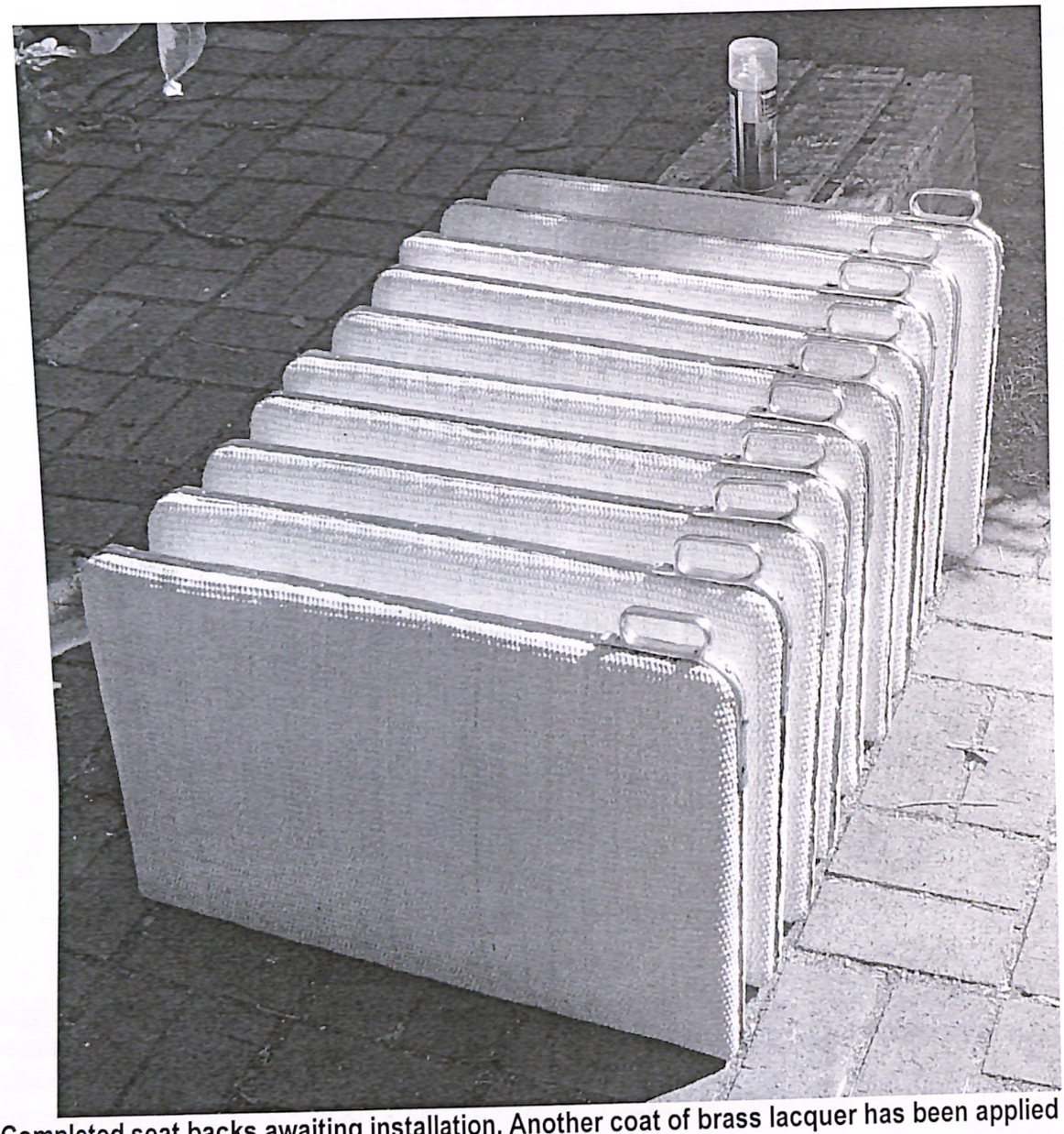


Varnishing the rattan. Cover the rattan well but do not allow excess varnish into the desuiti cloth.

10. When the varnish is dry, polish the brass strips, handles and their screws, lacquer the polished brass and fit. If new brass nails are required for the finishing strips, they are likely to be found at a ships' chandler.



Unpolished back handle and brass finishing strip



Completed seat backs awaiting installation. Another coat of brass lacquer has been applied after screwing of handles and nailing of brass strips.

11. After the seat bases are varnished, the laths should be screwed on the underside, covering the cut ends of the rattan. They can later be varnished.



Screwing on laths to underside of a seat cushion. The underside of the spring steel on this seat has been metal primed because of surface rust.

12. The seat backs must be screwed into position on the seat frames before the seats are installed as it in not possible to tighten the screws on the side against the car wall. Installation is completed by bolting outer seat castings to car wall and seat legs to floor. The rattan seat bases are then placed on position on the dowel castings provided.



Saloon of car 15, showing refurbished interior and Brill Winner seats *Chris Summers*

Suggested Rattan upholstery component measurements – check against actual work:-
Desuiti cloth (same for both layers) – Seats: - 500 x 955mm; Backs (2 off) 470 x 780mm
Padding – Seats 430 x 800mm; Backs (2 off) 440 x 740mm
Woven rattan 2 feet wide – Seats 1050mm length; Backs 840mm length, and trim afterwards

JCR 14-4-09