

Rheinmetall Frame Repair  
Austin, Texas June 2019  
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John TheShy Typospherian asked if I could look at the frame of his Rheinmetall. The thin aluminum frame was cracked. I spent a few days thinking about solutions as it sat on my desk. The machine is in great shape other than the obvious broken frame which made the machine not work as it should. With this model, the entire carriage removes with two hooks that are pivoted. This helped to access the break.



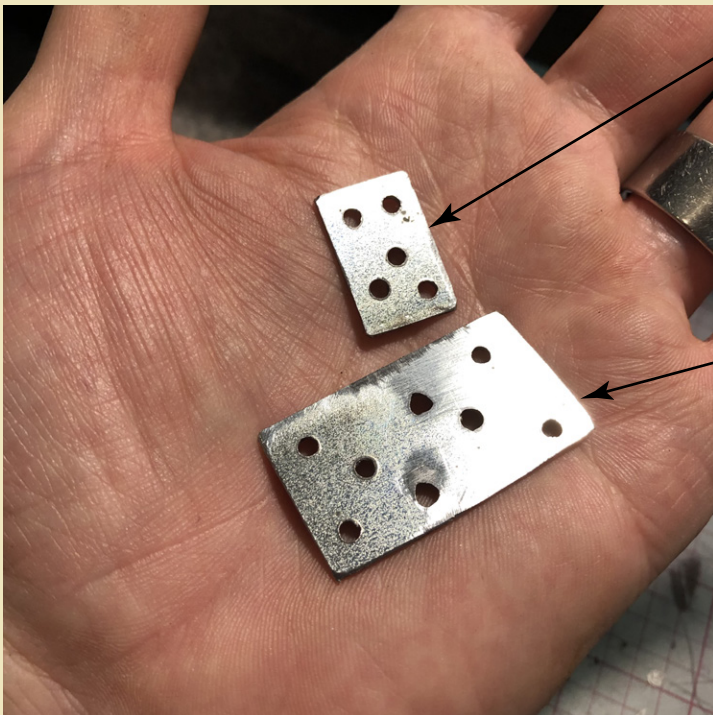
— This is the side with the relatively clean break.



The break was relatively clean and the frame was not bent. The aluminum frame in this area is thin and it makes sense that it would have broken here.

One of the two latches that made the removal of the carriage and platen assembly easy.

I wanted to strengthen the break because I did not want the carriage return to vibrate the repair over time.

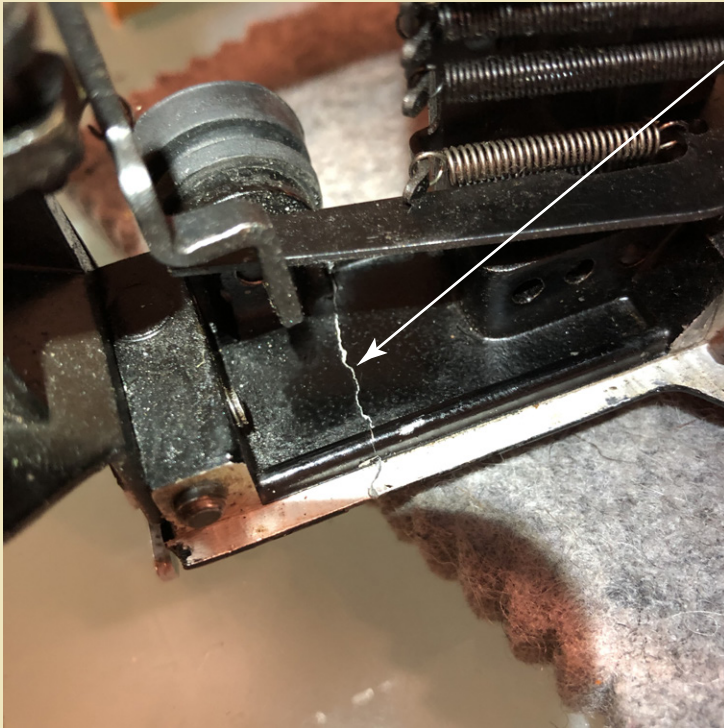


Inner plate / splint,  
This was created to fit within the cast aluminum frame. The drilled holes allowed for the “cold weld” (J-B Weld) epoxy to “bite” into the splints.

Outer plate / splint.

I was tempted to use mechanical fasteners and bolt through the frame. I decided not to do this because I felt it would have been a little overkill.

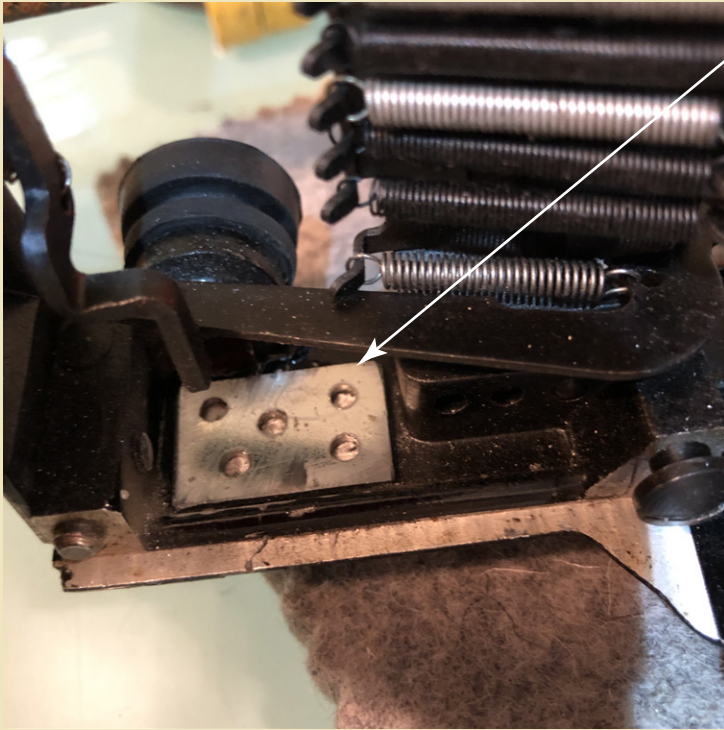




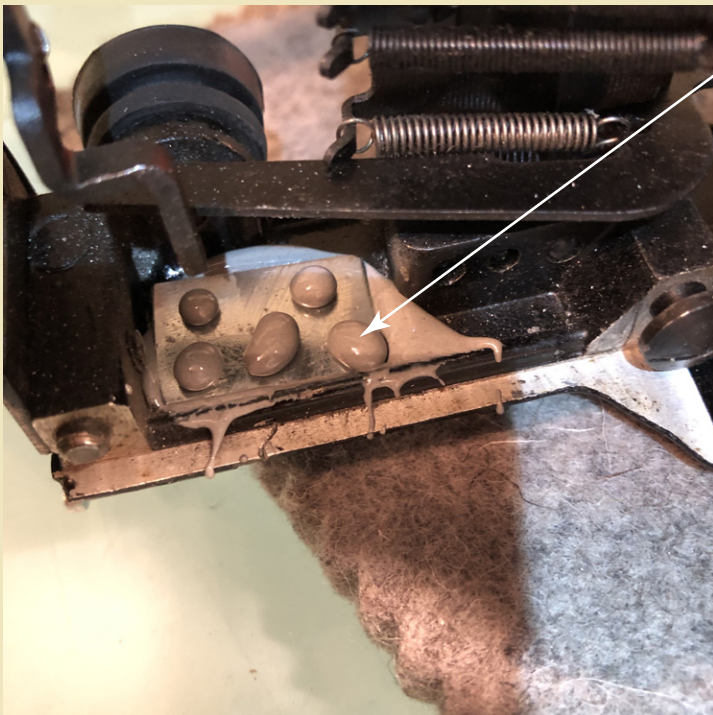
The break was relatively clean and the frame was not bent. A clamp was used to keep tension on the joint. I wanted to splint the inside of the frame before working on the outside splint.



A Dremmel Tool was used to remove the paint so that the weld would have a place to “bite” into. I wanted to get down to the metal instead of gluing to the paint.

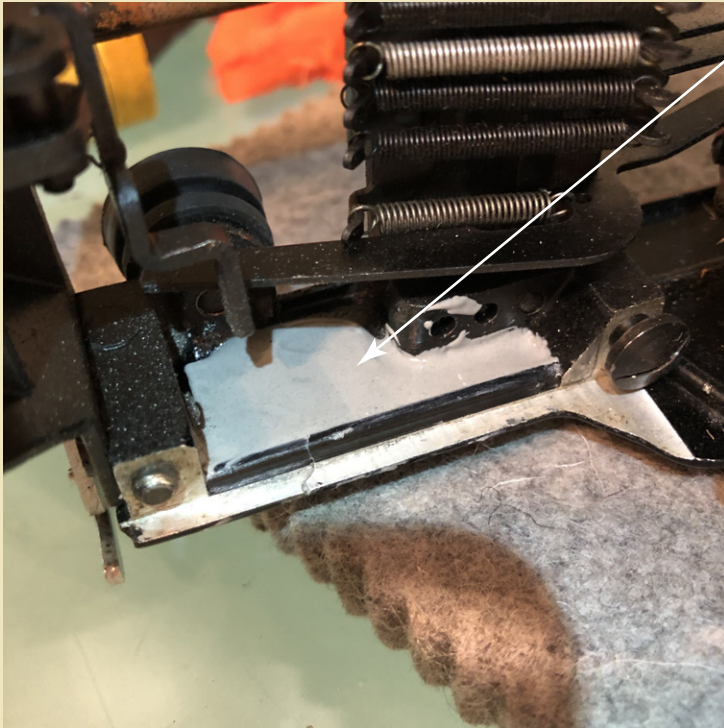


The metal plate was test fitted before the weld was applied.



The holes allow for the weld to bite into and go through the plate to grip. The plate was not pushed into the frame at this point.

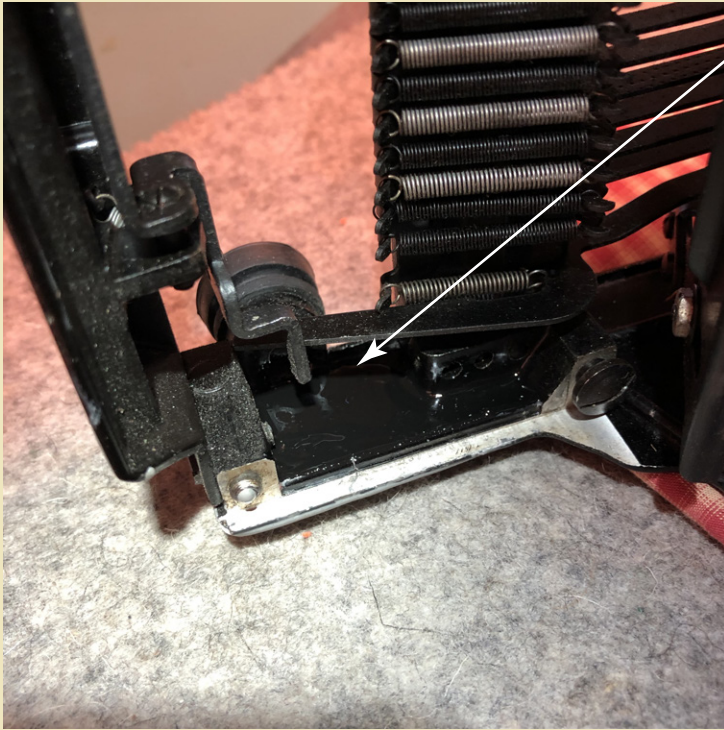




The adhesive / weld was then smoothed.



The weld was allowed to cure for 24 hours and the clamp was then removed.

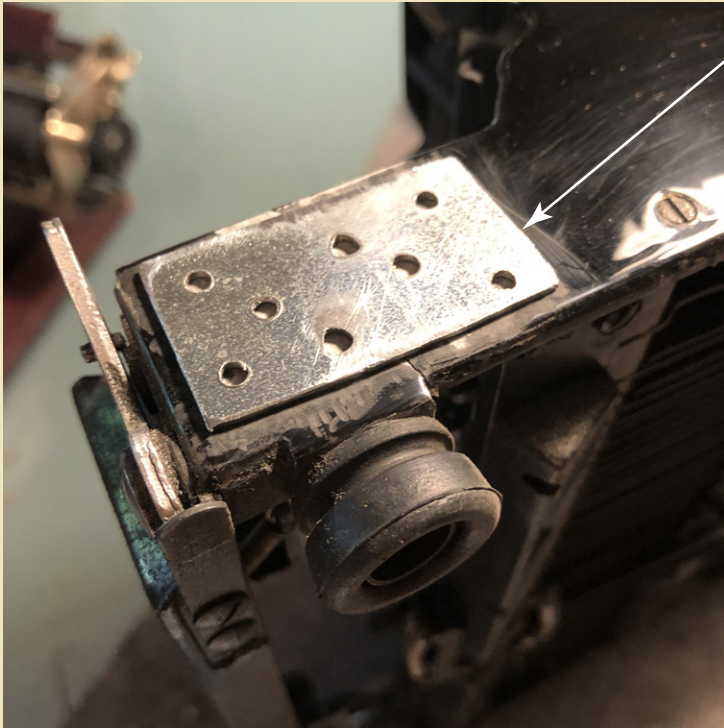


The weld was then painted with 1-Shot sign painter's paint.



The clamp was removed and the outside paint was removed to the metal with a Dremmel Tool in order for the adhesive to bind directly to the frame.





The plate was then dry fitted.



The plate was then set into the adhesive.



The adhesive was then sculpted with a credit card type plastic.



The weld was then painted with 1-Shot sign painter's paint.