

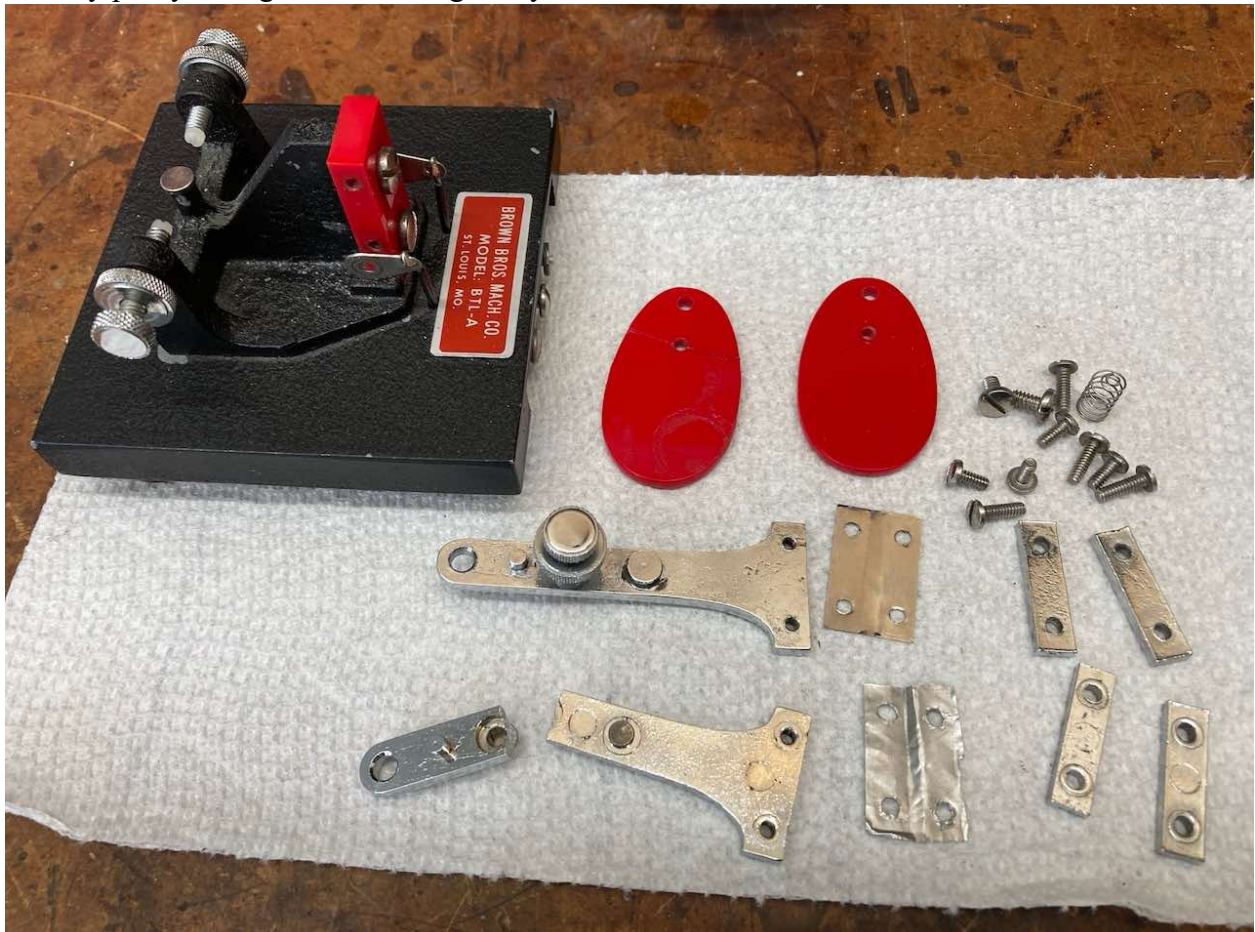
Restoring a Brown Brothers BTL Paddle

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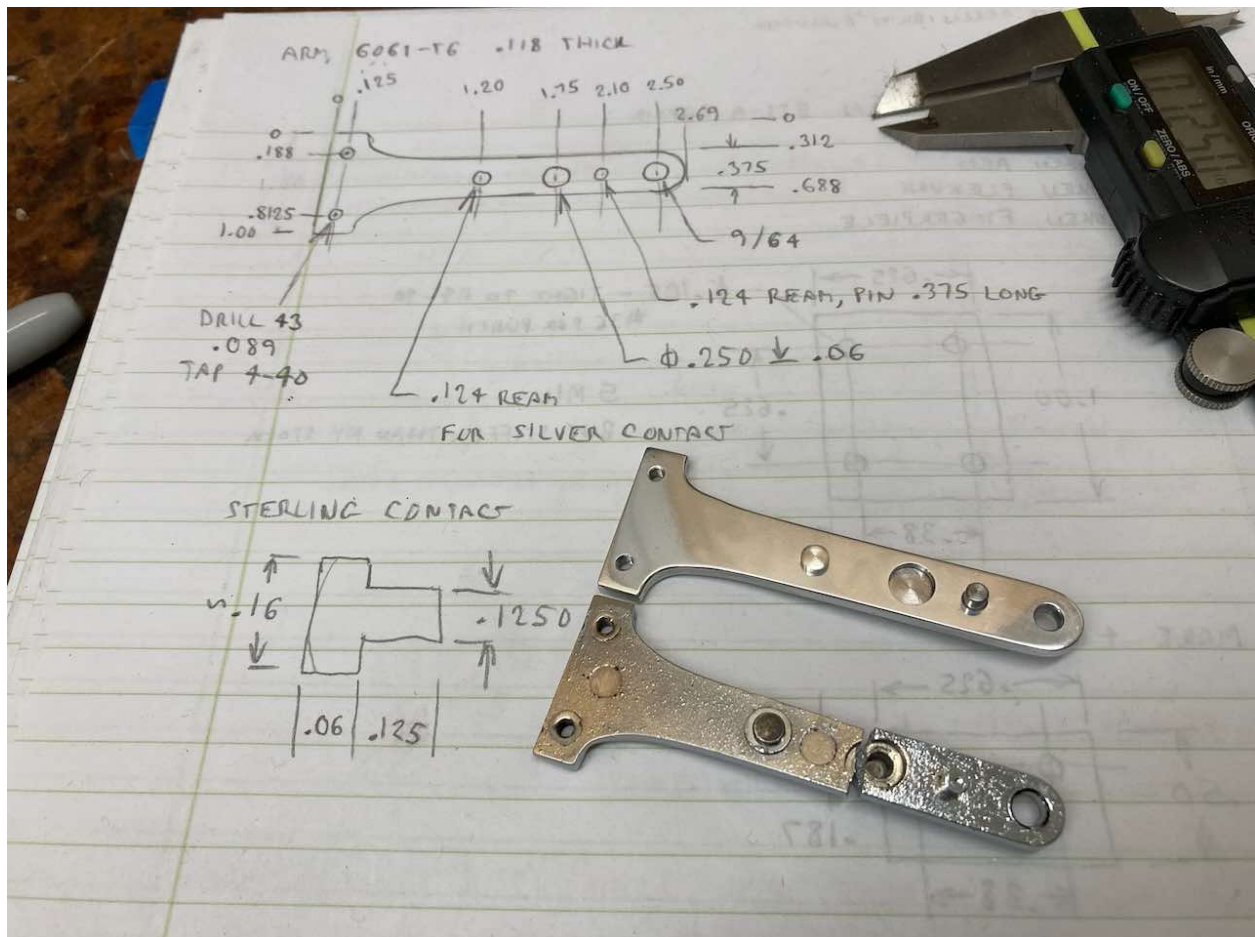
Apr 29, 2024

Many different Morse keys have passed through my shop for restoration and general tune-ups over the years. This month, I received a damaged Brown Brothers model BTL-A iambic paddle. Made in the 1960s through the 70s by a one-man shop, it uses flexures (flexible metal strips) instead of bearings. I actually owned this exact model, purchased in 1975, and as a hardcore CW op, it saw countless hours of use. Information on this company is available at <https://www.qsl.net/n6tt/brown.html>.

This particular key is owned by a blind ham, and from the damage I'm guessing something was dropped on it. There was further damage in shipping. As found: Fractured arm, broken finger piece, and both flexures mangled. The flexures are prone to damage anytime the key is manhandled; I have seen this before. The arms are chrome-plated cast aluminum which is actually pretty strong but something really whacked this one.



The first thing I did was make a new arm, machined from aluminum and exactly duplicating the original dimension. It was then highly polished and clear coated, making it look almost exactly like chrome. In fact the finish looks better than the original, which was fairly rough when plated. A new contact was machined from sterling silver, my standard contact material, then pressed into place.



New flexures were made from 6 mil feeler gauge stock. This is nice material, very springy and easily cut to size with tinsnips. A special punch and die had to be machined to punch the holes at precise locations and to achieve clean holes in the hard metal. This method is something I learned from a book by W. R. Smith, W4PAL (SK) called "How to Restore Telegraph Keys" available at <https://wrsmithlocks.com/product/how-to-restore-telegraph-keys/>. New finger pieces were sawn from 1/8 inch red acrylic sheet and then polished to perfection. They look identical to the originals. The final touch was fixing up the cable with proper spade lugs.

To prevent a repeat shipping disaster, I always make custom foam packing inserts for every key that I work on. My favorite packing material is Ethafoam, a medium density polyethylene foam that comes in large sheets. I get it from Bob's Foam Factory in Fremont.

The key came out looking and operating like new, or perhaps a bit better. If you have any kind of Morse key—straight key, bug, or paddle—that needs repair, restoration, or just a tuneup, give me a jingle.

