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COLD FORMED FIRING PIN TEST
5,000 Dry Cycles in M/700 Rifles

This test was conducted to determine the durability of cold formed firing pins. Standard firing pins were given the same test for comparison. Endurance testing by dry cycling indicated that the cold formed firing pins were as durable as the standard machined firing pins up to 5,000 cycles.

There was more evidence of cold working at the stopping shoulder on the cold formed firing pins than on the standard. This condition did not have a noticeable effect on the protrusion.

Standard Firing Pin Assemblies

Five firing pin assemblies were obtained from production to be tested as control samples. Two assemblies endured the test without visible deterioration. The firing pin heads remained tight. Two of the assemblies developed loose firing pin heads and the remaining assembly had a broken cross pin in addition to a loose firing pin head.

Cold Formed Firing Pins

Five cold formed firing pin assemblies were received from PE&C. The firing pin heads came loose on these assemblies. It was noted upon inspection that the firing pin shank, where the firing pin head was assembled, was undersize and deformed.

Five more firing pin assemblies were received from PE&C with firing pins trimmed back to the short length to remove the deformation. One firing pin showed no looseness after 5000 dry cycles. The four remaining assemblies developed loose firing pin heads.

Firing Pin Heads

It is thought that the firing pin heads contribute to this relatively short life in the dry cycling tests. These heads have heavy burrs at the mouth of the firing pin hole. By the best method (hole gage) of measuring available at the time this test was run there were indications of oversized and tapered holes.

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