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W. E. LEEK *W*

TEMPERATURE TEST ON NYLON RIB

Model XP-700 *Test*

Since it has been considered feasible to mold a nylon rib for the XP-700, it became necessary to determine the temperature effects on such a part.

The first test was to fire 25 rounds, measuring barrel temperature after each round. The barrel was allowed to cool 45 seconds between shots. Results of this test are shown on Fig. 1.

The second test consisted of firing 20 rounds in two minutes. Temperature was measured after completion of the string, and was found to be 170°F.

The third test was the firing of a 50 round string in four minutes. Barrel temperature at the end of the string was 236°F.

After completion of each test the rib was checked to see if it remained tight on the barrel. No loosening was experienced during or after any of the high temperature tests.

The last test, a low temperature test, consisted of dropping the temperature of the gun to -35°F. The rib was checked at this temperature, and was found to be tight on the barrel. The rib was again inspected when the gun had returned to room temperature and was found to be tight on the barrel.

During these tests the rib was fastened to the barrel with six screws, each compressing the nylon .010 before bottoming in the holes in the barrel.

*H. L. Chambers*  
H. L. Chambers  
Arms Design Section

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