

weather. However, the overall malfunction rate for the ten guns was 0.68 per cent. The rate for the poorest gun was 1.53 per cent.

The overall performance was considerably better than that of the Model 550 used as a control in these tests. It was noted that this is encouraging with regard to the anticipated performance of the Model 552, but does not give a true picture of the performance level of the Model 550. This is because of the use of the slip chamber in the Model 550, which requires occasional cleaning for proper performance. In particular, repeated firing of short cartridges in the Model 550 without cleaning will lead to sluggish action of the slip chamber due to an accumulation of powder residues between sliding surfaces.

Following the test referred to above, the best and the poorest of the Model 552s were continued to 2,000 rounds each, and showed an overall malfunction rate of 0.6 per cent. A rifle which had given average performance in the original section of the test was continued to 25,000 rounds with a malfunction rate of 0.88 per cent. The adjustments and breakages encountered during this test were as follows:

0 - 9,000 rounds. None.

9,900 rounds. The magazine follower came off.

10,100 rounds. Because of damage occurring when the magazine follower came off, the magazine tube was replaced.

15,100 rounds. The firing pin and retaining pin broke, causing the firing pin to move forward and damage the chamber, which required replacement of the barrel.

18,300 rounds. The buffer plate broke and was replaced.

20,000 rounds. The extractor spring broke and was replaced.

20,200 rounds. The action bar bent, causing light firing pin indent. This was adjusted.

21,500 rounds. The firing pin broke and was replaced.