

of these guns having a locking block, slide and bolt handle common to the 12, 16 and 20 gauge. However, in the above 4-gun test there were functional problems such as "stemming of top right chamber", "stem extractor", "blown heads and failure to trip carrier latch", plus additional miscellaneous malfunctions. It was believed that these were not caused by the changes to the breech bolt and barrel extension as proposed but caused by certain inherent factors in the current carrier latch design and carrier design. To further confirm this the following revisions were made to the current design:

- (1) Revised nib angle on carrier for better control of shell when feeding the smaller 20 gauge shell into the chamber.
- (2) Removal of the magazine follower nib to remove interference with shell when in feeding up.
- (3) Lighten spring tension on carrier latch release arm to insure more positive tripping of latch by lighter 20 gauge shell.

Test results with the above design revisions were completed on May 11, 1956 and were conducted as tabulated below. In order to introduce another variable the same four guns which were previously tested with their known malfunction rate were used to look for effect of the above mentioned three design revisions.

Performance of these guns in the endurance test "before" and "after" making the changes are as follows:

Gun No.	Number of Rounds	Before	After	Number of Malfunctions		Rate		Malfunction
				Before	After	Before	After	
518	1500	10	26	0	.72%	0.0%		Stem chamber and stem extractor
			16	0	.44%	0.0%		Failed to trip carrier latch
			10	0	.30%	0.0%		Pulled heads
			141	2	3.9%	.5%		Failed to blow back
			13	0	.36%	0.0%		Failed to lock gun
			0	2	0.0%	.5%		Barrel support interference
			0	2	0.0%	.5%		Failed to feed from mag.
			0	1	0.0%	.25%		Failed to feed up (bolt closed)

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523	3000	11	56	0	1.15%	0.0%		Stem chamber and stem extractor
			25	0	.50%	0.0%		Failed to trip carrier latch
			35	0	.75%	0.0%		Pulled heads
			13	3	.25%	.75%		Feed from mag.
			3	0	.05%	0.0%		Failed to lock gun