## RIFLE C2766 (telescopic sight)

R 194/1

"Three FBI firearms experts tested the rifle in order to determine the speed with which it could be fired. The purpose of this experiment was not to test the rifle under conditions which prevailed at the time of the assassination but to determine the maximum speed at which it could be fired.

..... Although all of the shots were a few inches high and to the right of the target,

this was because of a defect in the scope which was recognized by the FBI agents and which they could have compensated for if they were aiming to hit a bull's-eye.

Tested at 45 and 75 feet ("When we first received the rifle, there was not an opportunity to test it at long range ..."), Nov. 27, 1963 - III, 403-4. Tested at 300 feet, Mar. 16, 1964, III, 405.

Implies only purpose of the test was to determine the speed at which the rifle could be fired.

" ... we fired to determine actually the speed at which the rifle could be fired ... and also to determine the accuracy of the weapon ... " III, 403 - testimony, Robert A. Frazier

III, 405-11 - testimony, Robert A. Frazier:

"Commission Exhibit No. 554, consisting of three shots fired /at 100 yards/ in 6.5 seconds, which landed approximately 5 inches high and 5 inches to the right of the aiming point, all within a  $3\frac{1}{2}$ -inch circle. ..... The center of the circle in which they all landed would be about 5 inches high and 5 inches to the right." (p. 405.)

"Mr. Frazier. When we attempted to sight in this rifle at Quantico, we found that the elevation adjustment in the telescopic sight was not sufficient to bring the point of impact to the aiming point. In attempting to adjust and sight-in the rifle, every time we changed the adjusting screws to move the crosshairs in the telescopic sight in one direction it also affected the movement of the impact or the point of impact in the other direction. That is, if we moved the crosshairs in the telescope to the left it would also affect the elevation setting of the telescope. (p. 405.) ..... We found in this telescopic sight on this rifle that this /crosshair/ ring was shifting in the telescope tube so that the gun could not be sighted-in merely by changing the screws. It was necessary to adjust it, and then fire several shots to stabilize the crosshair ring by causing this spring to press tightly against the screws, to the point that we decided it would not be feasible to completely sight the weapon inasfar as windage goes, and in addition found that the elevation screw could not be adjusted sufficiently to bring the point of impact on the targets down to the sighting point. And, therefore, we left the rifle as soon as it became stabilized and fired all of our

shots with the point of impact actually high and to the right.

"Mr. Eisenberg. As I understand it, the construction of the scope is such that after the elevation or windage screw has been moved, the scope does not - is not automatically pushed up by the blade spring as it should be, until you have fired several shots?

"Mr. Frazier. Yes; that is true when the crosshairs are largely out of the And in this case it center of the tube. is necessary to move the crosshairs completely up into the upper portion of the tube, which causes this spring to bear in a position out of the ordinary, and for this windage screw to strike the side or the sloping surface of the ring rather than at 90 degrees, as it shows in Exhibit 555. With this screw being off center, both in windage and elevation, the spring is not strong enough to center the crosshair ring by itself, and it is necessary to jar it several times, which we did by firing, to bring it to bear tightly so as to maintain the same position then for the next shots. (p.406) ..... We attempted to /center the windage crosshair/ and found that it was changing - the elevation was changing the windage. So we merely left the windage as it was. (p. 411.)

"Mr. Eisenberg. If you had been shooting to score bulls-eyes ... what action would you have taken to improve your score?

. . .

Mr. Frazier. I would have aimed low and to the left - after finding how high the bullets were landing; you would compensate by aiming low left, or adjusting the mount of the scope in a manner which would cause the hairlines to coincide with the point of impact." (p. 407.)

Since Frazier was trying for accuracy as well as speed, why didn't he make this compensation for the scope which he knew was bearing high and to the right?

..... Moreover, the defect was one which would have assisted the assasin in aiming at a target which was moving away. Frazier said, "The fact that the crosshairs are set high would actually compensate for any lead which had to be taken. So that if you aimed with this weapon as it actually was received in the laboratory, it would not be necessary to take any lead whatsoever in order to hit the intended object. The scope would accomplish the lead for you." Frazier added that the scope would cause a slight miss to the right. It should be noted.

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however, that the President's car was curving slightly to the right when the third sho't was fired."

So the defect which the FBI did not, or could not correct, is actually a virtue. Why not prove this by firing from the same elevation, at the estimated distance, at a moving target travelling at the estimated speed?

> Check tests by Infantry Weapons Evaluation Branch Ballistics Research Laboratory. Dep't of the Army.

III, 441 ff., testimony, Ronald Simmons.

Could not sight in weapon, using scope, and to correct defect had to add two shims (p. 443).

Tower only 30 feet high, target distances 175, 240 and 265 feet (p. 444 and CE 579). Targets "standard head-and-shoulders silhouettes, approx. 2 square feet in area" (p. 445 and CE 582).

On the first four attempt, firers missed second target (p. 446).

Firers reported difficulty with bolt action and trigger pull (p. 447).

Telephone message from Meade Werner, Aberdeen Proving Ground, Apr. 6, 1964: "... The gunsmith observed that the scope as we received it was installed as if for a left-handed man." CE 2560

Oswald was right-handed: testimony of Marina Oswald, Feb. 5, 1964 (I, 84).

testimony of Robert Oswald, Feb. 20, 1964 - "I have never known him to handle anything - throw a baseball, football, et cetera, fire a rifle, or do anything, left handed." I, 293, 294.

Oswald was left-handed: testimony of Marguerite Oswald, Feb. 10, 1964 (I, 163).

Exh. 133 and 134 show pistol in right hip pocket, indicating subject fired pistol with right hand?