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DETAILS OF MR. CUNNINGHAM'S TESTIMONY

Mr. Melvin Eisenberg, Commission Staff Attorney, elicited the testimony from Mr. Cunningham concerning the physical characteristics of Oswald's revolver, a detailed description of the characteristics of the ammunition used in it and the identification of this revolver with the four cartridge cases recovered in the area of the slaying of Officer Tippit. His testimony also included information regarding the cartridges obtained from Oswald's revolver and from Oswald's pocket. Mr. Cunningham's testimony regarding the revolver included detailed descriptions of the revolver when manufactured as well as the obvious alterations of this weapon prior to its being sold to Oswald.

Various exhibits were introduced as Commission exhibits during Mr. Cunningham's testimony and detailed testimony was given concerning these exhibits. The Commission particularly showed interest in the photomicrographs illustrating identifications of the cartridge cases with Oswald's revolver. During this detailed testimony, the different types of marks found on these cartridge cases as well as the cartridge cases in the assassination were discussed.

Testimony was given regarding the results of examinations of the four bullets removed from Officer Tippit's body. Summarizing this testimony: Three of the bullets were caliber .38 Special copper-coated lead bullets of Winchester-Western manufacture which were fired from a barrel rifled with five lands and grooves, right twist. The fourth bullet is a caliber .38 Special lead bullet of Remington-Peters manufacture which was fired from a barrel rifled with five lands and grooves, right twist. One of the copper-coated lead bullets was so mutilated that no microscopic marks of value for identification purposes were remaining on its surface. Although microscopic marks remain on the other three bullets for comparison purposes, no conclusion could be reached as to whether or not these bullets were fired from the same weapon or whether or not they were fired from Oswald's revolver. In addition, it was found that even consecutive .38 Special bullets test fired from this revolver could not be identified with each other. Smith and Wesson revolvers such as Oswald's revolver are among the weapons producing general rifling

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characteristics of the type found on these bullets. Mr. Cunningham also testified in detail as to the probable causes of the inconsistent microscopic characteristics on these bullets.

Mr. Cunningham testified in detail concerning the paraffin tests performed in the FBI Laboratory insofar as the manner in which these tests were conducted and as to results of the treatment of certain of the paraffin casts with diphenylbenzidine, as outlined in my memorandum dated 3/31/64. This testimony included the Laboratory experiments which were performed many years ago and which found that these tests are extremely unreliable as to whether a person had recently fired a gun. All of the limitations of these tests were given to the Commission as well as the enumeration of numerous oxidizing agents which react positively to diphenylbenzidine.

Mr. Eisenberg wanted the testimony on the Walker bullet repeated in conjunction with the discussion of bullet characteristics, types, weights and so forth. Mr. Cunningham repeated most of the testimony of Mr. Frazier, although Mr. Eisenberg slanted his questions more to the bullet's construction and characteristics.

Photomicrographs of the identifications of the cartridge cases, a photograph of the breech face and firing pin of Oswald's revolver and a photograph depicting two of the fatal Tippit bullets (representing both brands of ammunition involved), along with similar brand test bullets obtained from Oswald's revolver, were entered during Mr. Cunningham's testimony. The evidence exhibits consisted of the cartridge cases, cartridges, test bullets from the revolver, sample cartridges of the type used by Oswald and a schematic breakdown of a .38 Special Smith and Wesson revolver (which appears in the National Rifle Association publication entitled "Firearms Assembly Handbook") were introduced as exhibits. A copy of the breakdown of the .38 Special Smith and Wesson revolver is attached for record purposes.