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PART ONE OF A SERIES

THE WARREN COMMISION REPORT
SOME UNANSWERED QUESTIONS

FRED J. COOK

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SOME UNANSWERED QUESTIONS

FRED J. COOK

When the report of the Warren Commission was issued, we asked Herbert L. Packer, of the Stanford Law School, to evaluate it for our readers ("The Warren Report," The Nation, *November 2, 1964). Mr. Packer's conclusion, which we shared then and now, was: "The verdict of history will be a long time coming. We have not seen the end of this affair. What the Warren Commission has done is to refute or render irrelevant the speculations of those who, out of whatever aberrant needs, still refuse to believe that Oswald, Ruby and the Dallas authorities were what they appear to be and not something more sinister."*

At the time Mr. Packer prepared his analysis, the supporting volumes of transcripts and exhibits, originally slated for release simultaneously with the report volume, were not available. As Mr. Packer pointed out: "This should not have been allowed to happen. Whether the fault lies with the commission or with the White House, it is a grievous one. What it means, very simply, is that there is not at this time an adequate basis for evaluating the quality of the commission's fact-finding process. The problem is particularly acute in the case of findings that rest wholly or largely on testimony by eyewitnesses. By a careful reading of the report one learns who some of these witnesses were and what the commission thought was established by their testimony. What one cannot learn is how their testimony was probed by the inquiry. . . . One assumes . . . that the probing was detailed and penetrating; but that remains a surmise until the raw material is available for examination."

Because of these circumstances, The Nation *is publishing the following detailed examination of the transcripts by Fred J. Cook, a crime reporter of many years' experience. His manuscript, as here presented, was delivered to us on May 9. Mr. Cook does not question Oswald's guilt. But his reading of the transcripts raises unanswered questions about how the assassination actually occurred. In publishing Mr. Cook's intensely interesting analysis of the evidence as it bears on these questions, we repeat what we have previously said about the Warren Commission and its staff (see editorial, November 2, 1965, p. 290); we have never doubted the good faith of the commission or the good faith or high quality of its staff. But the facts disclosed by the transcript, as they relate to the points that trouble Mr. Cook, are not conclusive, and from them reasonable men may reach different or, as in this case, variant conclusions. It could not be otherwise because the Warren Commission was a fact-finding body; it was not concerned with "legal truth" as it is established in an adversary proceeding (see "The Warren Commission" by Maurice Rosenberg of the Columbia Law School,* The Nation, *September 14, 1964). The historical verdict, which is something else again, will, as Mr. Packer pointed out, be a long time coming.*—THE EDITORS

Abraham Zapruder staggered away from five and a half seconds of horror in Dallas, his 8 mm. movie camera dangling from his hand. "They killed him, they killed him!" he kept screaming as he made his way blindly through the crowds and back to the office of his dress manufacturing firm at 501 Elm Street. Zapruder had just witnessed the November 22, 1963, assassination of President Kennedy; and, though he could not know it at the time, he had captured on film the most vital single bit of evidence the Warren Commission was to receive in its long investigation.

His camera had recorded virtually the entire sequence of the assassination. Its shutter speed subsequently enabled investigators to determine the speed and position of the Presidential car; its film detail established approximately the point at which the President was first hit and definitively the exact spot at which the final shot mortally wounded him. The Zapruder film is basic to any understanding of what happened in Dallas, and if its unchallengeable pictorial record is interpreted with any logic, it strongly suggests that Lee Harvey Oswald alone could not have fired all the shots on this day of assassination.

The Warren Commission, which studied the evidence of the Zapruder film, came to practically the opposite conclusion; it decided that Oswald, and only Oswald, had fired the lethal bullets. The process by which the commission arrived at this conclusion lies largely unperceived at the heart of the Warren Report, and to understand it one must examine in some detail the significance of the evidence preserved in Abraham Zapruder's graphic film strip.

Zapruder had established himself on a concrete abutment about 4 feet high and 2 feet wide on the right-hand side of Elm Street as it comes curving down, bending to the right toward the triple railroad underpass that President Kennedy was never to reach alive. Fom this vantage point, Zapruder had an almost unimpeded view of the entire motorcade as it swept along Houston Street and made its left-hand turn into Elm directly in front of the Texas School Book Depository where, in a corner sixth floor window, Oswald was crouched, waiting. There was just one obstruction in the range of Zapruder's camera, a large rectangular road sign reading, "Stemmons Freeway, Keep Right." This sign was to blot out the Presidential limousine during one short, early portion of the assassination sequence, but once the car emerged from behind the sign, every detail was vividly filmed.

In subsequent tests with the camera, the FBI determined that it took 18.3 frames per second. Each of these so-called "frames" is an individual picture, and by numbering the frames on the Zapruder film and carefully analyzing the progress of the Presidential limousine it was possible to determine with great accuracy both the sequence of the action and the vital timing involved. Zapruder's film showed clearly that President Kennedy, who had received a tremendous ovation in Dallas, was smiling and waving to the crowds during his entire approach down Elm Street. At frame 205, the rectangular Stemmons Freeway sign intervenes, cutting off a complete view of the Presidential party; but the President's head is still erect, his hand raised in a half wave,

and so he appears until frame 210, at which point he vanishes behind the sign, apparently still unhurt.

Fifteen frames later, the President is seen again—and a fateful change has set in. When he emerges from behind the sign at frame 225, his hands are just beginning to jerk toward his throat; he has evidently just been shot. This movement of the President's hands, barely discernible in frame 225, becomes definite in frame 226 and is nearly completed in frame 227. The film seems to establish that the President could not have been struck by the first bullet before frame 210.

With this much established, the official description of one suspect, three shells, three shots begins to collide with fact. Seated on the jump seat of the Presidential limousine directly in front of the President was John Bowden Connally, Jr., Governor of Texas. The Warren Commission was to conclude that the first shot to hit the President pierced the middle of his back on a line straight in from the shoulder joint, exited at high velocity from his throat slightly below the Adam's apple, plunged into Governor Connally's back on the right side, exited below his right nipple, fractured his wrist and ploughed a furrow in his thigh. The Zapruder film clearly disputes this reconstruction of events. By about frame 231, the President is shown at the climax of his reaction to the first wounding shot. Both of his arms are raised to shoulder level, hands clutching at his throat as if trying to tear out some offending object—the spasmodic reaction of the suddenly wounded. Yet there, directly in front of him, facing forward with face still serene, is Governor Connally. It seems inconceivable that the body of this man, as the Warren Commission contends, has already been penetrated and furrowed by an almost lethal bullet.

Why, in the face of this pictorial evidence—and, as we shall see, despite the clear and candid and completely credible testimony of Governor Connally himself—did the Warren Commission insist upon deciding that the Governor *must* have been wounded at a point at which all the pictorial and other evidence says he was still untouched? The answer is to be found in the irreconcilability of the one-assassin theory with the sequence established by the Zapruder film.

The Warren Commission, in reconstructing the case, conducted elaborate tests with Oswald's war-surplus, 6.5 mm. Mannlicher-Carcano rifle. It discovered that the fastest time in which the fastest trigger finger in the FBI could touch off a shot with the Carcano was 2.3 seconds. Then, on the basis of no evidence whatsoever, it made the further judgment that Oswald, who apparently hadn't fired a rifle in months, could match the fastest gun in the FBI. It was entirely possible, the commission ruled, that Oswald had fired a series of lethal shots spaced 2.3 seconds apart.

Though this basic premise of the commission is at desperate odds with the time table of the film, the conflict is just beginning. See what happens when one tries to fit this fastest firing time into the assassination sequence established by Zapruder's camera. The film was rolling 42 frames in 2.3 seconds. Medical evidence submitted to the commission held that Governor Connally, judging from the angle at which the bullet passed through his body, could not have been hit after frame 235. An FBI expert suggested that the Governor might have been hit up to frame 240, at

which point his body was twisted completely out of the line of fire. Governor Connally himself viewed the Zapruder film and testified that he believed he was wounded between frames 231 and 234, an opinion that agrees with that of the medical experts.

It seems clear from the Zapruder film that the President could not have been hit for the first time before frame 210. Even supposing that Oswald's trigger finger matched the lightning touch of the fastest hand in the FBI, he could not have shot the President at frame 210 and wounded Governor Connally before frame 252. And those vital 42 frames, representing 2.3 seconds, cannot be wedged between the maximum check points, frame 210 and frame 240.

How, then, did the Warren Commission reconcile the film evidence with the official theory of the assassination? It determined that President Kennedy and Governor Connally *must* have been wounded by the same bullet, in all probability the first one fired. This "solution" collides with the seemingly clear pictorial evidence of the Zapruder film, which shows Governor Connally apparently unharmed long after it is clear that the President has been hit. Expert witnesses helped the commission to reason away this disturbing evidence. They argued that it was impossible to tell from Governor Connally's reaction in the film precisely when he was hit; they explained that reaction times vary with the individual and with circumstance. Therefore, they argued, the Zapruder film evidence would not be conclusive, persuasive as it appears. And so, the commission evidently concluded, it could disregard the apparent collision between fact and theory and sustain the official line. To do so, it had to ignore a mass of other corroborative evidence.

Probably the one most forceful, cogent and completely credible witness during the entire Warren Commission investigation was Governor Connally himself. Tall and handsome, speaking quietly and clearly, with evident re-

straint and great care for exactitude, he created an impression of sanity and responsibility in an insane situation. Appearing on nation-wide television in the immediate aftermath of the issuance of the Warren Report, he was asked about the inconsistency between the commission's findings and his own clear recollection of events. He shook his head and said that it was difficult to quarrel with a panel of such distinguished experts but he could only repeat what he had said before—his mind was clear about what had happened, and it simply, to his recollection, hadn't happened that way. Let us see, therefore, just how specific and how detailed was Governor Connally's testimony before the Warren Commission.

The motorcade, the Governor said, had made the left-hand turn into Elm Street and had gone perhaps 150 to 200 feet down toward the Stemmons Freeway "when I heard what I thought was a shot. I instinctively turned my head to my right because the sound appeared to come from over my right shoulder, so I turned to look back over my shoulder, and I saw nothing unusual except just people in the crowd, but I did not catch the President in the corner of my eye, and I was interested, because once I heard the shot in my own mind I identified it as a rifle shot, and I immediately—the only thought that crossed my mind was that this is an assassination attempt.

"So I looked, failing to see him, I was turning back to look over my left shoulder into the back seat, but I never got that far in my turn. I got about in the position I am in now facing you, looking a little bit to the left of center, and then I felt like someone had hit me in the back."

The shots came so fast, Governor Connally testified, that "the thought immediately passed through my mind that there were either two or three people involved or more in this or someone was shooting with an automatic rifle." He described how the force of the shot drove him to the right; how, as he collapsed, his wife pulled his head into her lap; and how, lying there, he heard the sound of the third shot and saw the President's head literally explode.

Arlen Specter, one of the commission's assistant counsels, asked the Governor which shot, in his view, had caused his own injuries. It went like this:

GOVERNOR CONNALLY: The second one.

MR. SPECTER: And what is your reason for that conclusion, sir?

GOVERNOR CONNALLY: Well, in my judgment, it just couldn't conceivably have been the first one because I heard the sound of the shot. In the first place, I didn't know anything about the velocity of this particular rifle, but any rifle has a velocity that exceeds the speed of sound, and when I heard the sound of that first shot, that bullet had already reached where I was, or it had reached that far, and after I heard that shot, I had the time to turn to the right and start to turn to my left before I felt anything.

It is not conceivable to me that I could have been hit by the first bullet, and then I felt the blow from something which was obviously a bullet, which I assumed was a bullet, and I never heard the second shot, didn't hear it. I didn't hear but two shots. I think I heard the first shot and the third shot.

MR. SPECTER: Do you have any idea as to why you did not hear the second shot?

GOVERNOR CONNALLY: Well, first, again I assume the bullet was traveling faster than the sound. I was hit by the bullet prior to the time the sound reached me, and I was either in a state of shock or the impact was such that the sound didn't register on me, but I was never conscious of hearing the second shot at all.

Obviously, at least the major wound that I took in the shoulder through the chest couldn't have been anything but the second shot. . . .

A couple of facts corroborating this testimony should be noted. Governor Connally, because he sat on the jump seat in front of the President, became visible again to Zapruder's camera before the President did. At frame 222, the Governor can be seen clearly as the car emerges from behind the Stemmons Freeway sign. At this point, the Governor's head is turned sharply to the right (apparently he has just heard the first shot and is looking in that direction); he

continues to gaze to the right in frames 223 and 224, and in 225, when the President is first barely visible, with his hands just beginning to jerk toward his throat, Governor Connally is facing further forward, evidently beginning that turn to the left that he never completed before he himself was hit.

Sound registers at 1,127 feet per second; a bullet fired from Oswald's Carcano was later clocked at 1,904 feet per second at a range of 180 feet. In other words, if the first bullet that struck the President also inflicted the wounds on Governor Connally, the slug would have passed through the Governor's body before he became visible at frame 222; he would not have been able to turn his head to look to the right, he would not have been able to begin swinging his body back to twist and look to the left, as he testified he did and as the Zapruder film shows he did, *before* he received the impact of that second shot that stunned him and flung him violently to the right. The film sequence clearly says that this vital action, basic to the Warren Commission's entire reconstruction of events, *did not happen* the way the commission was to decide it *must have happened.*

In additional testimony, Governor Connally made a couple of comments that should be noted. In response to a question from Sen. John Sherman Cooper, of Kentucky, he explained that "I have all my life been familiar with the sound of a rifle shot, and the sound I heard I thought was a rifle shot, at the time I heard it; I didn't think it was a firecracker, or blowout or anything else. . . . I have hunted long enough to think that my perception with respect to directions is very, very good, and this shot I heard came from back over my shoulder, which was in the direction of the School Book Depository, no question about it. . . ." And in pinpointing exactly where he himself was hit by the second bullet, Governor Connally fixed on frames 231 to 234 and related his judgment to a roadside landmark, the Stemmons Freeway sign. "It was just after we came out of the sign (Zapruder frame 225) . . ." he told the commission.

Mrs. Connally was seated beside her husband on the left-hand jump seat of the Presidential car. She recalled in her testimony before the Warren Commission that, as the car made its swing into Elm Street, the welcome the President had received had become so heartfelt and enthusiastic she could not resist turning to him and saying: "Mr. President, you can't say Dallas doesn't love you."

She continued:

"Then I don't know how soon, it seems to me it was very soon, that I heard a noise, and not being an expert rifleman, I was not aware that it was a rifle. It was just a frightening noise, and it came from the right.

"I turned over my right shoulder and looked back, and saw the President as he had both hands at his neck. . . . I saw no blood, no anything. It was just sort of nothing, the expression on his face, and he sort of slumped down.

"Then very soon there was the second shot that hit John. As the first shot hit, and I turned to look at the same time, I recall John saying, 'Oh, no, no, no.' Then there was a second shot, and it hit John, and as he recoiled to the right, just crumpled like a wounded animal to the right, he said, 'My God, they are going to kill us all.' "

Mrs. Connally recounted how she pulled her husband's head into her lap, and seeing that he was alive, kept murmuring to him in reassurance that he was going to be all right. She had seen the Zapruder film strip before she testified, she said, and she agreed with her husband about the spot at which he had been wounded.

"I am not sure I remember the numbers so correct me," she testified, "but I thought at the time that it was 229—it could have been through the next three or four frames."

Allen Dulles, former Chief of the Central Intelligence Agency, was puzzled by one aspect of Mrs. Connally's testimony.

". . . Mrs. Connally," he said, "on one point your testimony differs from a good many others as to the timing of the shots. I think you said that there appeared to be more time between the second and third than between the first and second; is that your recollection?"

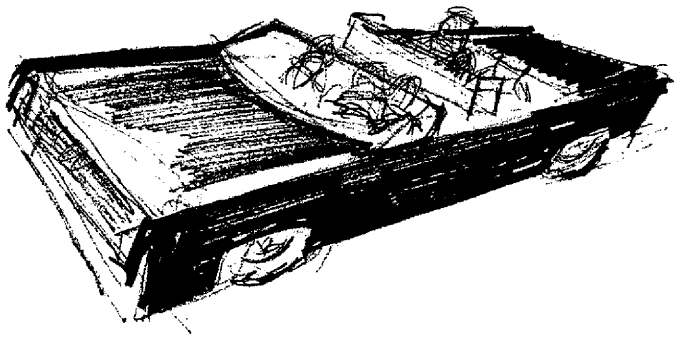
"Yes," Mrs. Connally said.

Here was an issue that was to plague the commission time and again. Some eyewitnesses thought the first and second shots came very close together; others were just as positive that close firing marked the second and third. Even when one makes allowance for the imperfection of human ability to recollect fleeting seconds of high crisis, many of these witnesses were highly intelligent, trained observers—and so the conflict was baffling to a commission that was trying to limit itself to three shots and to fit these three shots into an exact sequence. The Zapruder film's definite check points might have suggested an explanation —but not one limited to three shots. What the film said was that the President was wounded first shortly after frame 210; Governor Connally was struck before frame 240; and the last shot that blew out the side of the President's head came at exactly frame 313. This meant that the first two shots came very close together, so close that it is scarcely conceivable one man could have fired them both; and it meant that there was then a long pause of about four seconds before the final and fatal shot struck. This break in the action suggests the possibility of a slower and more reasonable firing time than 2.3 seconds; it suggests the presence of two marksmen. If shots were bunched either at the beginning or the end of the assassination sequence, it was manifestly impossible to have just a single sharpshooter touching off just three shots. One of the commission's major problems throughout was to get those three shots to which it had limited itself properly spaced, and the warring recollections of witnesses were a great befuddlement. Of course, if one considers the possibility of two riflemen, some of the difficulty begins to resolve itself. Two men firing at the same target, working bolt-action rifles as rapidly as possible, might indeed have touched off shots that almost synchronized at different stages of the assassination sequence. And since the marksmen would have been firing from different locations the distance covered by the shots and the distance sound had to travel would be different. The time relationship of the shots would have depended upon where a person stood in relation to firing; two shots might even have registered as one or, as Secret Service Agents were to testify, as a bang-bang coming right together.

Roy H. Kellerman, the Secret Service Agent in charge of the detail guarding the President in Dallas, rode in the right front seat of the Presidential limousine beside the

driver, Secret Service Agent William Robert Greer. Kellerman, too, had a landmark to help him fix the point of action—the Stemmons Freeway sign—and it should be borne in mind that, since he was in the front seat, he cleared the sign and was out in the open a split second before the President. The evidence of the Zapruder film shows Kellerman just coming into view at frame 218, and it was immediately after this, according to his testimony, that the shooting began.

"There was a sign on the side of the road which I don't recall what it was or what it said," he testified, "but we no more than passed that and you are out in the open, and there is a report like a firecracker pop. And I turned my head to the right because whatever this noise was I was sure that it came from the right and perhaps into the rear, and as I turned my head to the right to view whatever it was or see whatever it was, I heard a voice from the back seat and I firmly believe it was the President's, 'My God, I am hit,' and I turned around and he has got his hands up here like this."



Kellerman demonstrated how the President had grasped at his throat.

Kellerman said he then swung around, snapped to Greer to get them out of there fast, and grabbed the microphone to tell the Secret Service detail in the car ahead to speed them to a hospital. He continued:

"Now, in the seconds that I talked just now, *a flurry of shells* came into the car. I then looked back and this time Mr. (Clinton J.) Hill, who was riding on the left front bumper of our follow-up car, was on the back trunk of that car; the President was sideways down into the back seat." *(Italics added.)*

Greer, the driver, filled in the gap between Kellerman's first observation of the President's being hit and his next look into the back seat after it was all over. Greer testified that he heard the first shot and thought it was "a backfire of one of our motorcycle policemen." Then he heard a second. "And I glanced over my shoulder and I saw Governor Connally like he was starting to fall." Both Kellerman and Greer had one clear recollection, the rapidity of the last two shots. Kellerman estimated that there might have been a five-second pause between the first sound he heard and the second, but that the last two reports came almost together. This version conflicts with the Connallys' clear recollections and with the evidence of the Zapruder film strip which clearly indicates that the President and the Governor were wounded by separate shots fired no more than 1.6 seconds apart (the maximum elapsed time if one takes frames 210 and 240, the earliest and the latest possible, as firing points) and perhaps considerably closer together if one judges from Kellerman's testimony that the action began around frame 220 and accepts Governor Connally's version that he was wounded no later than frame 234, the equivalent of seven-ninths of a second.

Kellerman himself in his testimony seemed to be aware of some puzzling and haunting conflict that his memory could not help him resolve. He referred again and again to "a flurry of shots," but he had a clear recollection of only three reports. Two large bullet fragments from one of the shots came flying into the front seat between Greer and Kellerman; one of these fragments or some other fragment chipped the inside of the windshield just to the right of the driver; and there was another dent in the chrome plating at the top of the car. This splintering of bullets and showering of fragments into the front seat might partially account for Kellerman's "flurry of shots" impression, but it can hardly explain away his own clearest and most positive recollection, the almost simultaneous reports of the last two shots that he heard—an effect that could hardly be created by a lone sharpshooter with a bolt-action rifle.

Asked how many shots he had heard after the first noise, Kellerman testified in a manner that hinted at his own uncertainty. "I am going to say two," he said, "and it was a double bang—bang, bang."

He described the shots as "instantaneous." Pressed to describe how closely the third report followed the second, he gave this illustration: "You have heard the sound barrier, of a plane breaking the sound barrier, bang, bang. That is it." Repeatedly, Kellerman indicated that he felt there must have been more than three shots, but he couldn't recall having heard more. "I'll have to say 'No,' " he answered when asked if he had heard more than three.

Instructed to mark on a map where he thought the President's car was when the second shot was fired, Kellerman drew a red "Y" in the roadway. He said he could not advance the car at all for the third shot; in his opinion, it had struck in the same place.

Greer's recollection matched Kellerman's. Where Kellerman had used the word "instantaneous" to describe the last two shots, Greer used "simultaneous." He had had barely time to turn his head after his rapid glance into the back seat on hearing the second shot when he heard the report of the third. "The last two seemed to be just simultaneously, one behind the other," he said. "It seemed like there was the

first one, and then there was, you know, bang, bang, just right behind it almost."

It is perhaps advisable to pause here and see what meaning can be derived from the dovetailing and quite positive recollections of Greer and Kellerman about those last "simultaneous" or "instantaneous" reports. The evidence of the Zapruder film segment says that *neither of these reports* related to the shot that felled Governor Connally. The Governor could not have been wounded after frame 240; the shot that killed the President struck at frame 313. This is inescapable fact. Governor Connally was struck almost exactly four seconds before the shot that killed the President; and, if Kellerman and Greer were right—and they were both highly trained Secret Service Agents—virtually simultaneous reports at the end of the firing sequence could

mean only that another shot was fired at this point in addition to the one that killed the President.

How, then, does one account for the agents hearing only three shots if at least two, the first that wounded President Kennedy and the second that wounded Governor Connally, had been fired prior to this final "flurry"? It should perhaps be noted that the four seconds of elapsed time between the wounding of Governor Connally and the killing of President Kennedy corresponds closely with Kellerman's memory of a five-second gap in the firing sequence. Only, judging by the Zapruder film strip, the agent must have misplaced the location of this gap. In the tension of the moment, this is understandable; furthermore, logic suggests a fairly simple explanation. This tragic action erupted so rapidly and unexpectedly that witnesses could easily have been confused about what they heard. There would be a normal lag in human reaction, a failure instantly to comprehend the meaning of those first two closely spaced shots, and the reports may well have blended in consciousness into the recollection of a single sound. Especially might this be true for Kellerman and Greer, seated in the front of the car and so a little more remote from the action; but, if the agents were right about those "simultaneous" final reports after their senses had been alerted, it can mean only that the shot that killed and another shot from another gun were fired almost together at this point.

All of this emphasizes the crucial importance of determining whether the commission's conclusion that the first shot wounded both the President and Governor Connally is tenable. The Zapruder film record and the testimony of Governor Connally and his wife say it is not. Furthermore, *not a single eyewitness* the commission heard saw the action in the way that the commission decided it had happened. *All, without exception,* were convinced that the President and Governor Connally were felled by two separate, wounding shots. S. M. Holland, veteran signal supervisor for the Union Terminal Railroad, was stationed on the overpass, looking directly down at the motorcade as it approached him. Holland gave a precise description of exactly what he saw. He described how the President was waving to the spectators, then "he went over like that [indicating], and put his hand up"—and a moment later the sound of a shot, "the first report I heard," reached him. ". . . the car traveled a few yards, and Governor Connally turned in this fashion, like that [indicating] with his hand out, and another report. . . ."

Mrs. Jean Lollis Hill was standing with her friend, Mary Moorman, who was to take a famous picture of the assassination with her Polaroid camera. Mrs. Hill was yelling to the President to get him to look toward them, and he had just started to turn his head in her direction when the first shot hit him. Then there was a second, and Governor Connally went down. Mrs. Hill, a schoolteacher, had heard before she testified that the commission was postulating the theory that one shot had struck both the President and the Governor; but she insisted, with respect to Governor Connally, "it wasn't the first shot. To me he wasn't hit when the first shot hit." Asked what shot she thought hit the Governor, she said, "the second."

What did the Warren Commission make of all this? To its partial credit, it seems to have been disturbed and perplexed. The reaction became clear during the questioning of FBI Agent Lyndal L. Shaneyfelt, who explained to the commission how his colleagues, with the aid of the Zapruder film, made a test-run reconstruction of the assassination. Shaneyfelt pointed out that Governor Connally, since he became visible at frame 222, in which he was already looking to his right as if he had just heard a shot, had been in camera range longer than the President. Yet throughout some twelve frames of this longer viewing time he continued to appear so natural that some of the commissioners had difficulty crediting he had already been shot. In Vol. 5, p. 155 of the commission testimony, one finds this passage:

> DULLES: But you would then have the problem you would think if Connally had been hit at the same time, would have reacted in the same way, and not reacted much later as these pictures show.

JOHN J. MCCLOY (another commissioner): That is right.
DULLES: Because the wounds would have been inflicted.
MCCLOY: That is what puzzles me.
DULLES: That is what puzzles me.

It is not clear at just what point in its investigation the commission stopped puzzling and decided to embrace the hypothesis of the double wounding by the single bullet. But it did so; for otherwise it could not avoid a head-on collision with the inflexible Zapruder film sequence. This decision carried with it corollary decisions. It meant that two shots must have found their mark and done all the damage, and that one shot missed the Presidential car completely. It meant that, by adopting the fastest possible 2.3-second firing time as a standard, the commission could permit Oswald one miss, and still fit its one-assassin theory into the imperatives established by the Zapruder film.

This basic decision, by which the commission sought to reconcile the discrepancies, led it, however, into another maze. Since it now had one shot missing completely, which shot must it decide had missed? The commission ducked this vital point by not deciding, but it is obvious that only a first-shot miss could really reconcile the commission's theory with Governor Connally's explicit testimony that he had heard one shot before the second hit him. Only if the first shot had missed completely, only if it was the second shot (which Governor Connally did not hear and which everyone else would have had to mistake for the first shot) that struck the President and wounded the Governor—and even then only if Governor Connally could sit for the better part of a second without giving any indication that he had already suffered an almost mortal wound—only if all of these implausibilities can be accepted does the commission's theory even begin to make sense. But at precisely this juncture the natural geography of the site makes a first-shot miss seem highly unlikely.

Looking down from Oswald's perch, FBI agents discovered that a large oak reared up to block off the view of the Presidential motorcade as it drove down Elm Street. It was not until the motorcade reached the spot indicated by frame 210 on the Zapruder strip (the very point at which the action was hidden from Zapruder for 15 frames) that Oswald would have begun to have a clear and unimpeded target. Prior to that, there was just one fleeting instant in which the President's back would have become visible through a gap in the oak leaves. *If* Oswald had fired at the President through such a chancy aperture, *if* this shot had hit a twig or limb and ricocheted away, *then* conceivably the assassination *might* have happened the way the commission insisted on reconstructing it (provided always that one can ignore the actions of Governor Connally). But the commission itself was dubious of such a first-shot miss, however vital to its theory. It wrote that "it is unlikely that the assassin would deliberately have shot at him [the President] with a view obstructed by the oak tree when he was about to have a clear opportunity." And later it adds that "the greatest cause for doubt that the first shot missed is the improbability that the same marksman who twice hit a moving target would be so inaccurate on the first and closest of his shots as to miss completely, not only the target, but the large automobile."

At this point, the vulnerability of the commission's one-assassin theory begins to become apparent. Even so, it is surprising to discover that at least one key FBI witness specifically spelled out for the commission just how hypothetical and uncertain it was. The witness was Robert A. Frazier, the fastest marksman in the FBI and the expert who squinted through Oswald's Carcano telescopic sight in the reconstruction test run at Dallas. Frazier explained in meticulous detail how, based on the information given him by the commission, he had staged the re-enactment. He had carefully measured the angle of fire; he had had the action stopped at vital points indicated by the Zapruder film; and when his sights had lined up the marked bullet hole on the jacket of the President's stand-in, more measurements had been taken and a rod had been placed between the President's stand-in and the gubernatorial stand-in to show the perfection of the angle between the exit point on the President's neck and the entry point on the Governor's back. It is most persuasive testimony, if one can discount Governor Connally's explicit description, if one can discount the pictorial evidence of the Zapruder film, if one can discount all the other eyewitness testimony corroborating Connally. And *if* one stops reading at this point, without listening to Frazier as he scrupulously explains just how theoretical this entire reconstructed sequence is.

The revelation comes when Specter asks Frazier to express his professional opinion on the commission's one-bullet-multiple-wound theory.

"There are a lot of probables in that," Frazier testified. "First, we have to assume there is absolutely no deflection in the bullet from the time it left the barrel until the time it exited from the Governor's body. . . . I feel that physically this would have been possible. . . . However, I myself don't have any technical evidence which would permit me to say one way or the other, in other words, which would support it as far as my rendering an opinion as an expert. I would certainly say that it was possible, but I don't say that it probably occurred because I don't have the evidence on which to base a statement like that."

Frazier emphasized that "we are dealing with hypothetical situations here." He explained that he could never be certain that the actors in the re-enactment had been perfectly placed to duplicate the positions of the President and the Governor because films are "only two dimensional. They don't give you the third dimension." He had no way of knowing that there had been absolutely no deviation in the flight of the bullet; even a slight change of a few degrees would throw off all calculations—and he had seen "bullets strike small twigs, small objects, and ricochet for no apparent reason. . . ." He explained that "if the bullet entered the Governor's back and immediately took a 20-degree leftward angle, then the Governor could have been shot as he was facing straight forward in the automobile. Now, I can't tell that, and therefore I can only say that *my opinion must be based on your assumption* that there was not a deviation of the bullet through the President's body and no deviation of the bullet through the Governor's body, no deflection. On that basis then you can say that *it is possible* for both of them to have been hit with one bullet." *(Italics added.)*

And that was as far as Frazier would go. The commis-

sion itself had to take it the rest of the way—and it did, even though some of its members indicated that they had persistent doubts. Here is the paragraph of bizarre logic in which doubt is metamorphosed into positive conclusion:

> Although it is not necessary to any essential finding of the Commission to determine just which shot hit Governor Connally, there is persuasive evidence from the experts to indicate that the same bullet which pierced the President's throat also caused Governor Connally's wounds. However, Governor Connally's testimony and certain other factors have given rise to some difference of opinion as to this probability but there is no question in the mind of any member of the Commission that all the shots which caused the President's and Governor Connally's wounds were fired from the sixth floor window of the Texas School Book Depository.

There may have been no question in the mind of any member, but an array of other testimony, and certain implausibilities, suggest that there should have been.

There is no intention here to exculpate Lee Harvey Oswald. One of the unfortunate aspects of the post-assassination furor is the manner in which vital issues have been obscured by the shouts of some well-meaning partisans that Oswald was completely innocent. The Warren Commission proved one angle beyond reasonable doubt—Oswald was directly involved.

Consider just some of the major evidence which the commission developed to link Oswald to the crime: the Mannlicher-Carcano C2766 was mail-ordered from Klein's Sporting Goods Co., in Chicago on March 30, 1963, by one "A. Hidell"; on "A. Hidell's" instructions it was shipped to Post Office Box 2915 in Dallas, a box that from October 9, 1962, to May 14, 1963, was rented to "Lee H. Oswald"; and when Oswald was arrested after the murder of Patrolman J. D. Tippit, police found in his wallet, along with his own Selective Service card and a card showing his service in the Marines, a forged Selective Service card bearing the signature of "Alek J. Hidell"—and the picture of Lee Harvey Oswald. After the assassination, a palm print identified as Oswald's was lifted from the barrel of the rifle; Oswald's left index fingerprint and right palm print were found on the homemade paper bag used to carry the gun into the School Book Depository; and another palm print identified as his was found on the top of the carton on which the sniper had crouched behind the sixth-floor window. Ballistics tests established that the nearly whole bullet recovered from Governor Connally's stretcher was fired from Oswald's Carcano—and no other gun; that the two large bullet fragments found in the front of the Presidential limousine came from Oswald's Carcano—and no other gun. To contend in the face of all this—and much more besides—that Oswald was innocent is to endorse absurdity.

But, in all logic, it is just as hard to believe that Oswald acted alone. We have already seen how the commission's one-assassin theory collides with the film record and the other evidence concerning the wounding of Governor Connally; how the commission tried to reconcile the irreconcilable by developing its one-miss and one-shot-multiple-wound theory. Even this rationalization, however, presented the commission with some thorny problems and necessitated that it build Oswald into something he patently was not—one of the world's greatest marksmen.

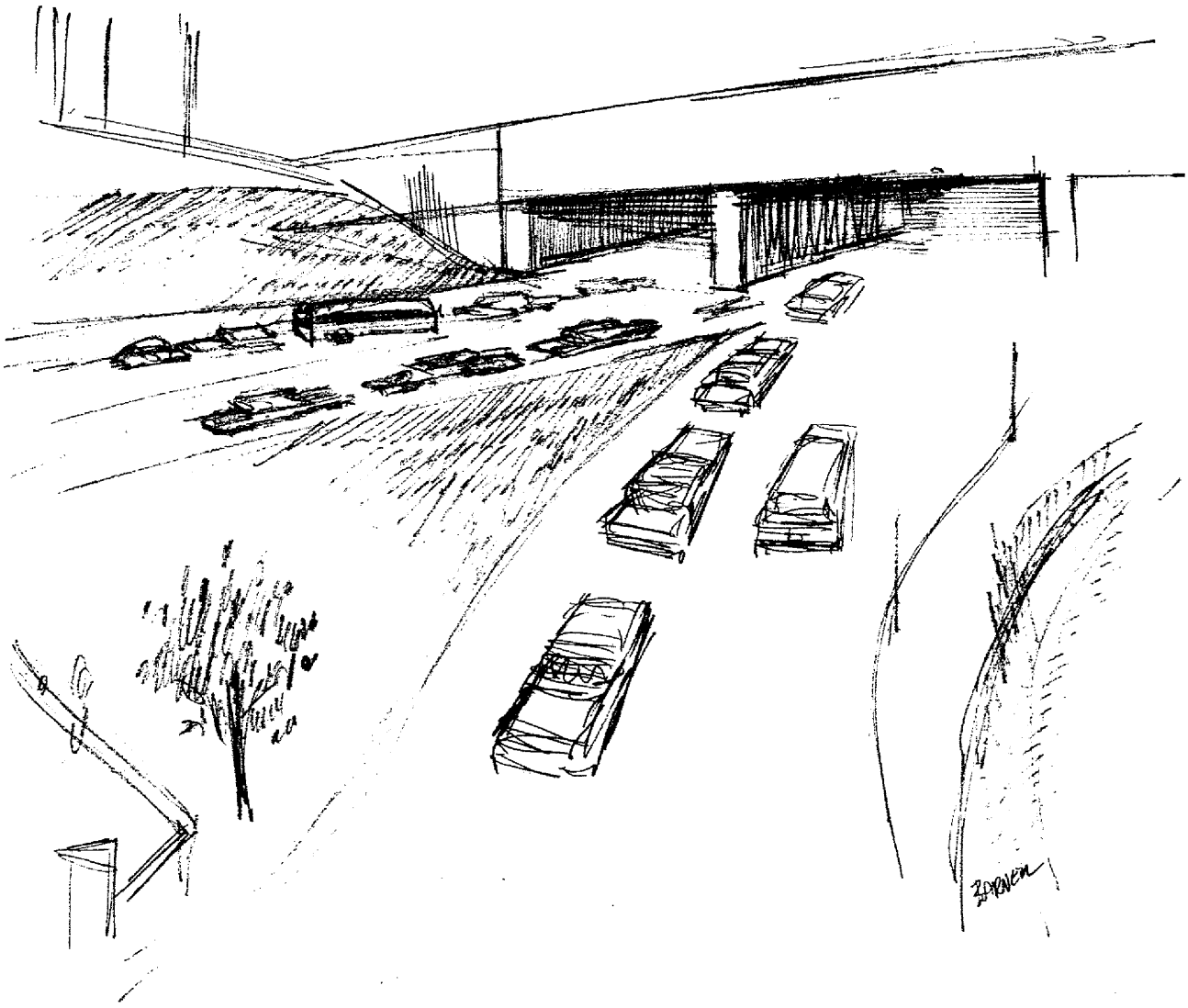
For to find that Oswald alone turned the Presidential limousine into a scene of carnage, the commission had to decide that he had the capability to fire three shots in five and a half seconds, two of them at least with unerring accuracy. The commission's judgment that this performance was well within the range of Oswald's capabilities was based primarily upon his record in the Marines.

As a Marine recruit, Oswald had received intensive training in all forms of small-arms fire. Twice he was tested and rated on a rifle range. In the first test, December, 1956, he scored 212, two points above the minimum qualification of sharpshooter on a scale that ranges upward from marksman to sharpshooter to expert. Oswald was obviously a good shot at this point in his career, but he was still not one of the world's best. In May, 1959, in his second test, Oswald scored 191—just one point above the minimum for marksman, the lowest designation on the efficiency scale. It would appear that he had not improved, but had retrogressed. His "lowest of low marksman's" rating indicated he was "a rather poor shot," according to the testimony of Lt. Col. A. G. Folsom, Jr., head of the records branch of the U.S. Marine Corps.

One of the most striking features of the commission's final report is the legerdemain by which this "rather poor shot" is converted into a superb marksman. The transformation was performed with the assistance of Major Eugene D. Anderson, Marine Corps marksmanship expert. Major Anderson explained that when Oswald shot 212, "he had just completed a very intensive preliminary training period. He had the services of an experienced, highly trained coach." On the second test, the Major said, there was "little probability" that Oswald had such an expert coach and "he probably didn't have as high a motivation because he was no longer in recruit training and under the care of a drill instructor." His weapon also might not have been in as good condition. Considering all these factors, said the Major, "I would say that as compared to other Marines receiving the same type of training, that Oswald was a good shot, somewhat better than or equal to—better than the average let us say. As compared to a civilian who had not received this intensive training, he would be considered a good to excellent shot." In other words, if you compared Oswald with a civilian who had never been trained to shoot, Oswald would look pretty good—and so, the commission implied, the "rather poor shot" was really an "excellent" one.

Aside from the weakness of this reasoning, there is another significant point in this aspect of the testimony. Major Anderson emphasized the importance of intensive drill, of constant training. Marksmanship, like any other precise skill, calls for regular and constant practice, and Major Anderson evidently attributed the fall-off in Oswald's score on the second test to just such a lack of drill. But if that is true, then Oswald on the day of the assassination must have been a much poorer marksman than he was when he left the Marine Corps.

There is no evidence—and the commission conceded as much—that Oswald had been on a firing range for months prior to the day of the assassination. Rumors that he had taken target practice and had exhibited fabulous dexterity



were checked out thoroughly by the commission and dismissed. The commission concluded that witnesses evidently had confused another rifleman with Oswald. Marina Oswald could remember only one occasion, months earlier, when Oswald had taken the rifle and told her he was going to practice with it. Both her testimony and that of the Paine family, with whom she stayed in Irving, Tex., indicated that the rifle, wrapped in a blanket, had been kicking around the Paine garage from the time the Oswalds returned from New Orleans in September until the morning of the assassination. Logic says that under such circumstances the "rather poor shot" of 1959 should have become an even poorer shot by 1963.

Yet Oswald, as anyone who has talked to hunters or expert marksmen knows, would have had to be little short of fantastic to achieve the feat attributed to him in Dallas. The incredulity of the experts, literally international in its scope, arises on two scores: the idiosyncracies of the Carcano, and the speed and accuracy with which Oswald would have had to operate what is really a cranky gun. My own notes are punctuated with the remarks of experts who look upon the Carcano with skepticism, if not contempt. At the New York Sportsman's Show in 1964, one marksman snorted, "Impossible!" in discussing Oswald's supposed feat with the Carcano. "It can't be done," he said. "Did you ever try to fire a Carcano fast? The bolt action isn't anything like the bolt action on a Springfield, for instance. You don't just pull it straight back and slam it forward. It's got a twist to it; you have to squirrel it." Another expert commented on the impossibility of firing a Carcano at lightning speed unless a special valve-grinding compound had been used to smooth out the contrary bolt action. The Carcano, he explained, has what is called "a sticky bore," and the squirreling action as the bolt is slammed home helps to throw the gun off target more than would be the case with smooth-action rifles like the Springfield or the Mauser. "Oswald would have been better off with a Sears Roebuck rifle or a second-hand gun picked up from a pawnbroker," this expert declared.

The Warren Commission gave no emphasis in its report to this additional difficulty standing in the way of its theory, but its record shows that the point was detailed in testimony. The idiosyncracies of the Carcano were explained by Ronald Simmons, chief of the Infantry Weapons Evaluation Branch of the Army's Ballistics Research Laboratory and the expert who supervised some of the tests conducted with Oswald's gun. Simmons described a series of tests fired by three riflemen rated Masters by the National Rifle Associa-

tion—a ranking that means they had all shot in national rifle championship competition. All of these sharpshooters practiced for some minutes with the bolt of Oswald's Carcano before they actually began firing; still, they had trouble with it. They commented, Simmons said, about "the amount of effort required to open the bolt. As a matter of fact, Mr. Staley [one of the experts] had difficulty in opening the bolt in his first firing exercise. He thought it was completely up and it was not, and he had to retrace his steps as he attempted to open the bolt after the first round.

"There was also a comment made about the trigger pull, which is different as far as these firers are concerned. It is in effect a two-stage operation where the first—in the first stage the trigger is relatively free, and it suddenly required a greater pull to actually fire the weapon."

Simmons pointed out: "In our experiments, the pressure to open the bolt was so great that we tended to move the rifle off the target. . . ."

He thought that this "might not have occurred" if the marksmen had had "greater proficiency" (more practice) with Oswald's Carcano, but obviously "considerable" experience with the weapon would be required for any kind of fast and accurate firing.

One other serious flaw in Oswald's assassination equipment should be noted. The telescopic sight mounted on the rifle by Klein's when Oswald purchased the gun was a cheap one of Japanese make—and defective. Frazier, the FBI gun expert, testified that, with the scope, the rifle consistently threw shots high and to the right; at 100 yards, this resulted in shots flying as much as 5 inches high and 5 inches to the right. Frazier said there was apparently some defect in the scope which could not be readily corrected, but he pointed out that a marksman who had used the gun, knowing this flaw, could compensate for it in lining up the cross hairs on the target. It would seem, however, that this additional computation, plus the necessity to "lead" a moving target, could not have been conducive to the rapid and extremely accurate fire attributed to Oswald.

Other witnesses pointed out to the commission that even expensive telescopic sights tend to get jarred out of proper alignment and that good hunters always practice with their guns and adjust the sights before going out for deer. These witnesses testifield it was inconceivable that Oswald's cheap Japanese sight, jolting around in the back of a station wagon all the way from New Orleans to Dallas and later being moved from place to place in the Paine garage, would not have developed wayward tendencies of which Oswald himself could not have been aware without test-firing the gun. He apparently never did so.

Yet the commission record turns this defect, which would make accurate sighting impossible, into an aid to accuracy. The tendency of the rifle to shoot high, Frazier explained, would virtually eliminate the necessity to "lead" the target, and the quirk that resulted in the rifle's throwing shots to the right might also have been an advantage, because the curve of Elm Street would help to bring the target into line. Of course, all such fancy theories depend upon the supposition that Oswald was such an ignorant marksman he would not attempt to lead his target or compensate for the Elm Street curve; for, if he had tried to make such routine allowances, without having previously test-fired the rifle, he would have insured a set of misses. In any event, it becomes apparent from such considerations just what a chancy business this one-assassin theory is, and the chanciness is emphasized still more when one studies what happened to real master marksmen who tried to duplicate Oswald's supposed performance.

Frazier testified first about a series of tests fired by himself and two other FBI agents. Parenthetically, anyone who has seen FBI gun experts shoot on an FBI range could hardly fail to be impressed by their speed and accuracy. Bearing this in mind, it is instructive to see what happened when Frazier, Charles Killion and Cortlandt Cunningham tried to duplicate the fast firing attributed to Oswald. In a test on November 27, 1963, five days after the assassination, Killion got off three shots in *nine seconds*; Cunningham required *seven*; Frazier, *six*.

Even these slower firing times do not tell the entire story. Frazier explained that they were not firing under circumstances at all comparable to Oswald's; they were simply aiming at silhouette targets at a range of 15 yards in a test designed to show primarily how fast the Carcano could be operated.

The results must have been jolting, for Frazier, whose time was the fastest, fired two more series of three shots each. The range this time was 25 yards; the purpose, again, to show "how fast the weapon could be fired," with only secondary attention to accuracy. Under these circumstances, which obviously provided no valid comparison, Frazier got off his first round of three shots in 4.8 seconds; his second round in 4.6 seconds.

Still a third test was performed at 100 yards on the Quantico firing range, with the attention given this time to both accuracy and speed. Parenthetically, it should perhaps be noted that, for exceptionally fast firing, rifle experts prefer the iron sight to the telescopic sight. They explain that the recoil of the rifle sets up vibrations in the cross hairs of the telescopic sight, making it more difficult to line up the target quickly for the next shot. This difficulty, not emphasized by the commission in its report, possibly accounts for the slower firing times registered by the FBI agents on the Quantico range. Again each agent fired a round of three shots. The firing times: 5.9 seconds, 6.2 seconds, 5.6 seconds.

But this was not the end of the complications. Frazier was asked what would have happened if he had been firing at a moving target, and he replied: *"It would have slowed down the shooting.* It would have lengthened the time to the extent of allowing the cross hairs to pass over the moving target." Could he estimate how much additional time this might have taken? *"Approximately one second,"* he replied. With "considerable practice" with the weapon, something there is no indication Oswald had, Frazier thought his firing times might have been reduced—but *"4.6 seconds is firing this weapon as fast as the bolt can be operated, I think."* This fastest, bolt-action-only time (a statistic that does not reflect accuracy or the necessity to adjust to a moving target) thus became the commission's standard in deciding that Oswald could readily have performed the deed attributed to him.

When one turns to the series of tests run under the super-

vision of Simmons, the Army ballistics expert, the results are no more persuasive. Simmons' three Master marksmen from the National Rifle Association fired at silhouette targets placed at 175, 240 and 265 feet—the approximated distances at which the commission had deduced the shots might have been fired. Again, it must be emphasized that Simmons' marksmen were firing at *still* targets; they did not have to adjust for speed and so use up that precious extra second that Frazier had estimated would be required. The results:

First expert: 8.25 seconds on his first three-shot series; 7 seconds on the second.

Second expert: 6.75 seconds and 6.45 seconds.

Third expert: 4.6 seconds and 5.15 seconds.

Only one of the three championship marksmen—and he only on one round and firing at still targets—had matched the firing time attributed to Oswald. And even these sharpshooters, with still targets, had trouble matching Oswald's supposed accuracy with the moving car. All three NRA men hit the first and closest target perfectly. But when they shifted to the second target, their first four shots missed completely. The angle of adjustment was less for the third shot, but still one of the bullets fired in the standard test with the telescopic sight (one marksman fired an extra round with an iron sight) flew wide of the mark.

From this test, it would seem, as the commission itself virtually concluded, that Oswald's first shot would have found his mark and that, if he missed, he would have missed most probably with his second shot. His third shot then, coming at Zapruder frame 313, would have been the last shot, and the entire action would have been compressed into 100 frames (even less if one concludes the President was first wounded around frame 220) and into 5.5 seconds of time. *On this basis, Oswald would have accomplished something beyond the capacity of the fastest trigger fingers the commission could find.* None of them fired at a moving target; none of them had to take that extra second Frazier had estimated would be necessary. And still they could not match Oswald's supposed feat. In all, according to the commission's own records, fourteen rounds of three shots each were fired; in only two of these rounds (and one of these was designed to test bolt-action speed only) did the fastest trigger fingers approximate the time attributed to Oswald. In the other twelve, they failed—and in most, they were not even close!

Yet the commission decided that Oswald placed the cross hairs of his telescopic sight on target and squeezed off shots of unerring accuracy. The investigation in Dallas had left the commission with just one suspect, Lee Harvey Oswald. And the commission, it would seem, lacking other evidence, decided that Oswald and his capabilities *had* to fit the case, ignoring the alternate conclusion that, if they simply would not fit, there *had* to be another explanation.

If Oswald were not alone, if he acted in concert with a confederate, more than three shots must have been fired (since the discharged shells would indicate Oswald himself fired three)—and so a second sniper must have been firing at the President at the same time from a different vantage point. Is there any evidence of this? The answer is: Yes.

(To be continued in The Nation, *June 20)*

LETTERS *(continued from page 698)*

institutions who have supported our activities to confirm the nongovernmental character of their support.

Finally, in a letter published by *The New York Times* on May 9, signed by J. K. Galbraith, George Kennan, J. Robert Oppenheimer and Arthur M. Schlesinger . . . it is stated that "an examination of the records of the Congress, its magazines, and its other activities will, we believe, convince the most sceptical that the Congress has had no loyalty except an unswerving commitment to cultural freedom. . . ."

Denis de Rougemont
Chairman, Executive Committee
Nicolas Nabokov, Secretary-General

baby bonus

Estes Park, Colo.

DEAR SIRS: Robert Theobald's article, "Should Men Compete with Machines?" [*The Nation,* May 9] contains a specific suggestion for the implementation of a negative income tax—$1,000 for each adult and $600 for each child. Such a plan would accentuate the problem of overpropagation within the lowest income groups, the same groups that should be most benefited by the idea. It would seem rather silly to invest in birth control clinics, then pay the indigent to make kids (as we are doing at the present time). I would prefer to see a family minimum income that would be sufficient for two or three people but would not increase as the family grows.

William S. Devick

uneasy border

New York City

DEAR SIRS: Gail D. Stark's "Cambodia Beset" [*The Nation,* Apr. 18] presents a rather lopsided picture of historical relationship between Cambodia and her neighbors. . . .

The Thai Government and its responsible authorities have repeatedly made statements, both public and private, to the effect that Thailand has no aggressive designs on Cambodia and we are fully prepared to respect Cambodia's neutrality, provided that it is genuine and does not serve as a bridgehead for further Communist encroachment into Southeast Asia.

Events in the last several years, however, prove to the contrary. . . . C. L. Sulzberger of *The New York Times* wrote on May 1, as follows:

> . . . Cambodia is indeed a sanctuary and supply source for the Vietcong *on such a scale* that the Phnom Pen Government must know of it.

Sulzberger then wrote about "an impressive build-up of Vietcong and North Vietnamese troops" on the Cambodian side. An intelligence officer, said Sulzberger, wryly comments: "The V. C. is using Cambodia all over the place." Indeed, an extension of the Ho Chi Minh Trail inside Cambodia has now become known as the "Sihanouk Trail. . . ."

Not only is Cambodia willing to be used as a tool for Communist expansionist forces but has also chosen to sustain a systematic campaign of provocative actions against Thailand in the border area. Cambodian soldiers have been firing daily their rifles, machine guns and mortars into Thai territory and at Thai citizens across the border. Ray Cromley in his column of Apr. 14, in the New York *World-Telegram* told us that Sihanouk even had the audacity to say, "we have also sent men to lay mines on the other side [within Thailand] and have succeeded in making them jump like grasshoppers. . . ."

Anand Panyarachun, Chargé d'Affaires
Thailand Mission to the UN