PELLET GUN TRAINING

A Big Assist to Marksmanship

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When the Air Force became an autonomous service in 1947, Air Force officials decided that marksmanship training was not needed for personnel of the "flying service." But as a result of the 1949 Hukbalahap uprising in the Philippines and the Korean Conflict, it became evident that a need did exist for Air Force officers and airmen to have some skill in handling weapons. Therefore, over the years several directives were published and an arsenal of weapons authorized. Recognizing that weapons were being placed in the hands of inadequately trained personnel, General LeMay, then vice chief of staff, directed that small arms training be reinstituted as a general military training requirement for all Air Force personnel. Since then, the Air Force has developed an increasing capability in the small arms training field.

Major Stone attended Wittenberg College, the University of Nebraska, and the University of Maryland. He has had assignments as an Air Training Command flying instructor, B-29 photo reconnaissance and B-47 bomber pilot; operations staff officer for 98 Bomb Wing, 818 Air Division, and 2nd Air Force Headquarters. His overseas assignments include Yokota AB, Japan and Lakenheath AB, England. During the period 1960-1962 he was the small arms competition training project officer for 2nd Air Force and Hq SAC. At the time he wrote this article, he had responsibility for general military training and small arms competition activities with the Directorate of Personnel Training and Education, DCS/Personnel, Hq USAF. Major Stone was author of 2nd Air Force Manual 50-2, Small Arms Marksmanship Training.

Fundamental Objective

The fundamental objective of the Air Force small arms training program is to train Air Force personnel in marksmanship principles so they are qualified to handle their assigned weapons. Related objectives are to accomplish this task *quickly*, *effectively*, and *economically*.

Several factors, however, have limited the complete desired attainment of these objectives:

- One trip to the range per year is hardly enough to develop real enthusiasm for the program, to say nothing of improving basic shooting skill and becoming familiar with the use of arms.

• Small arms instructor manning limitations reduce the amount of individual attention an instructor can give a student during the busy training season on the range.

• Inclement weather restricts small arms training at many Air Force bases.

• Combat crews, security and law enforcement officials, and other personnel have little time to participate in small arms training, especially where travel distance to the range is excessive.

• There is a continuing shortage of range facilities. Only 50 percent of the major continental United States Air Force bases have range facilities which will accommodate M-16 rifle training. Many bases throughout the Air Force have no facilities at all.

• Fund and materiel limitations remain a serious problem. The Air Force has a continuing shortage of small arms training munitions. Caliber .38 and .45 ammunition remain in short supply. Increasing use of caliber .223 ammunition in support of the M-16 rifle injects new cost factors, because the caliber .30 carbine ammunition has been provided to the Air Force without cost from surplus government stocks.

After an extensive review and evaluation of the marksmanship program and its problems, an indoor pellet gun training program was established to supplement Air Force small arms marksmanship training.

Not a Substitute

Air Force training officials have emphasized that the pellet gun training program will never be a substitute for qualification with the actual weapon. However, they view it as a valuable adjunct to the standard program.

A new general military training manual (AFM 50-15) requires that pellet guns and related equipment be procured at all but combat area bases. In combat areas, major commands will have the option of using pellet guns as part of their weapons training program.

Pellet gun training program development efforts and test results proved that the pellet gun is an excellent training aid and that skills learned with the pellet gun are readily transferred to the actual weapon.

There is an even greater potential with the pellet gun for increased training participation, proficiency, and economy. A good illustration of this is in the report of the Laughlin AFB evaluation of the pellet revolver and training program.

Pilot Test

In 1964 marksmanship officials at Laughlin tested and evaluated the program now being adopted Air Force-wide. Sixty-eight pilot trainees used the pellet revolver for preliminary training in marksmanship fundamentals and then transitioned to the caliber .38 revolver for familiarization. They then fired the qualification course with this revolver. Here are some of the statements contained in the Laughlin evaluation report:

• Students gained as much or more value from firing 150 pellets as previous students had from firing 200 rounds of standard ammunition.

• Relative quiet operation of the pellet revolver and absence of recoil allowed students to concentrate on fundamentals, instead of noise and recoil; therefore, they increased in proficiency at a rapid rate.

• The system accurately reflects common errors in shooting and the students are able to correct mistakes through self-analysis.

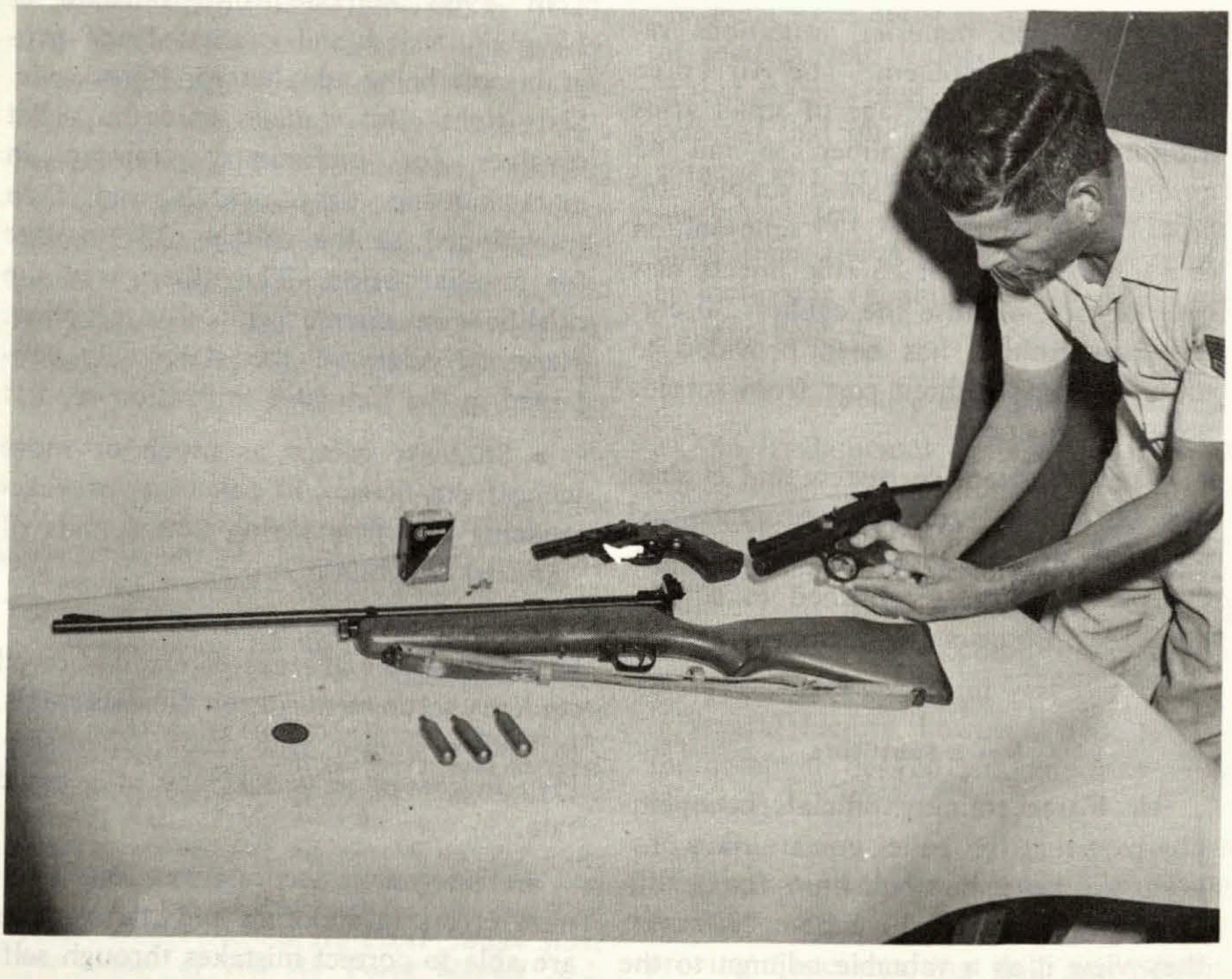
- The pellet revolver accurately simulated the caliber .38 revolver.
- There was less than a three percent average variation between students qualifying with pellets and students qualifying with standard ammunition.
- Savings, while practicing fundamentals of firing with pellets, were approximately $11.25 per student.

It should be pointed out here that initial procurement costs for equipment are low. During 1963, the Air Force spent $1,044,627 for small arms qualification training ammunition alone, not counting the cost of carbine ammunition. Procurement of complete sets of authorized pellet gun training equipment costs for the Air Force is an estimated one million dollars.

Another outstanding feature of the pellet gun training program is its low operating cost. Current small arms qualification training ammunition costs per round are approximately six cents for a caliber .38, eight cents for a caliber .45, and nine cents for a caliber .223. In contrast, pellets purchased in quantity cost one-fourth cent each.

Three Basic Weapons

Three basic training weapons are authorized in the existing program: a revolver, a semi-automatic pistol, and a single-shot rifle. Each of these weapons has an application in one or more of the available courses of fire. Carbon dioxide gas (CO_2) power is supplied through use of disposable gas powerlets or through



Pellet gun training equipment is simple and inexpensive.

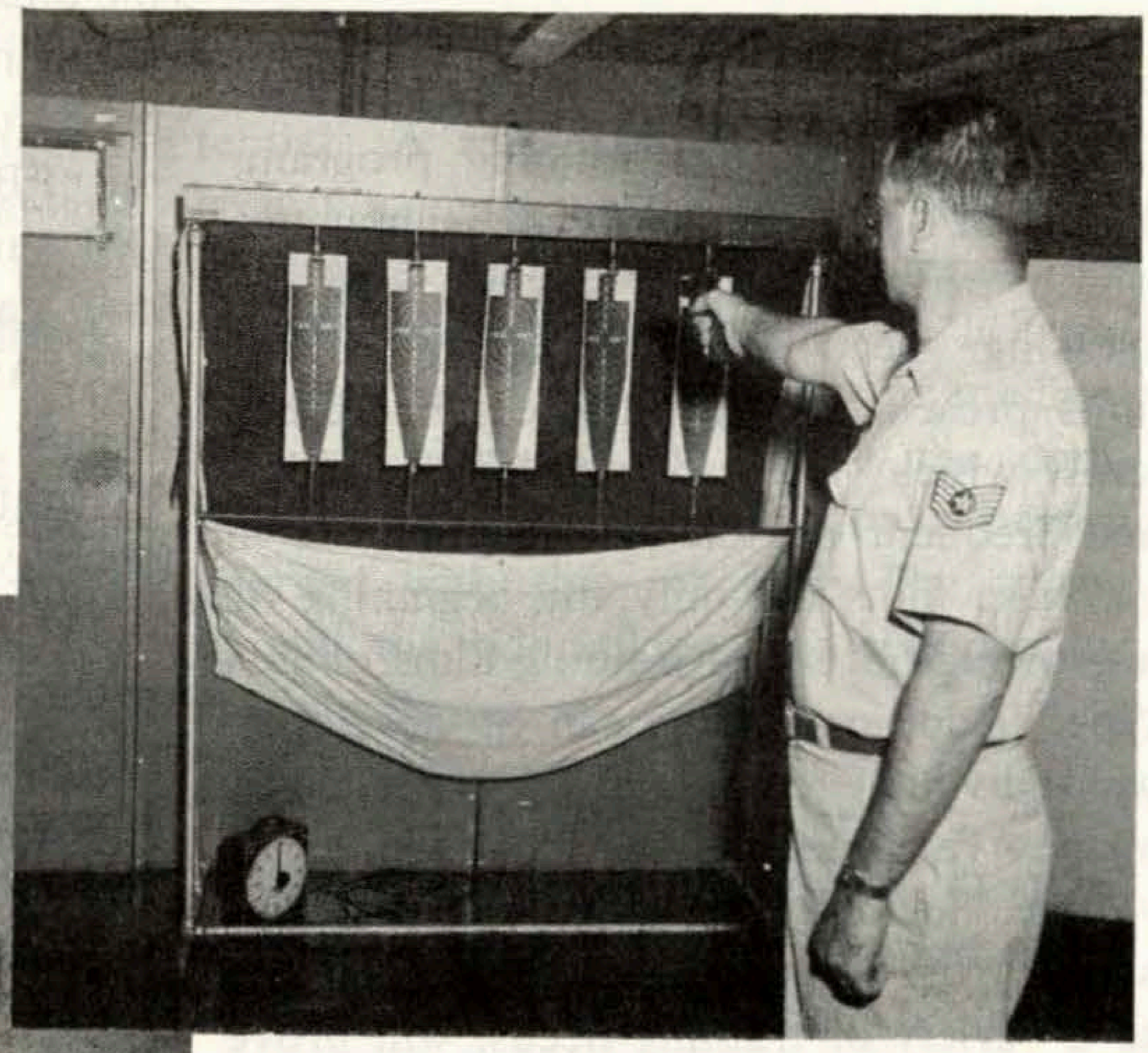
adapter units which permit recharging from more economical bulk CO_2 supplies.

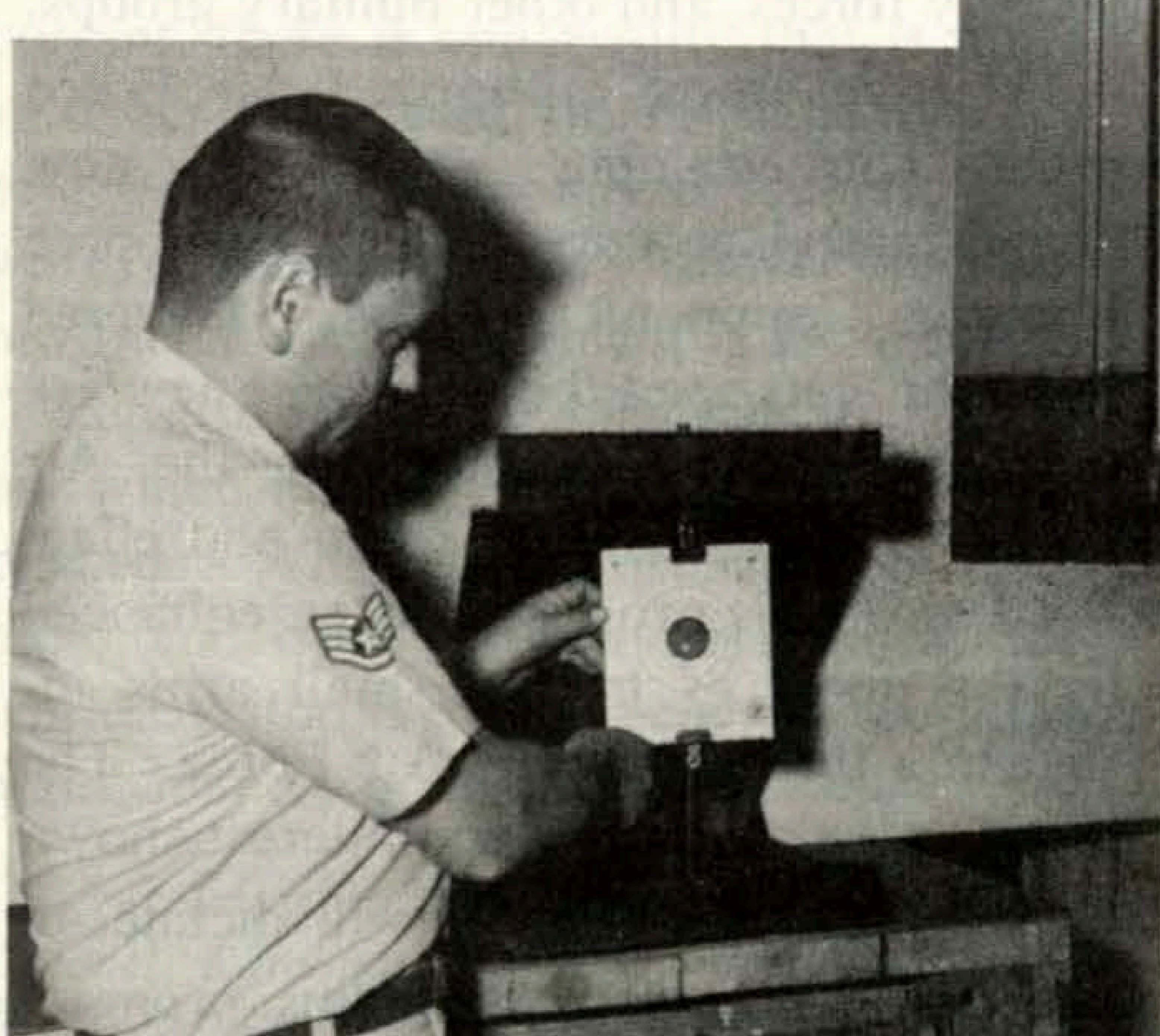
Pellet gun training ranges may be installed in almost any indoor area where there is a total floor space of at least 25 feet by 10 feet. Since the pellet guns are fired by carbon dioxide gas, fumes caused by expanded primers and powder, and the accompanying noise are eliminated.

Ricochet problems are also eliminated because fired pellets are trapped in one of two types of targets which are a part of the system. One type, a multipurpose target trap, permits practice at moving silhouette targets on a projection screen or converts to the standard Air Force qualification target.

Both judgment and shooting skill are developed in evaluating security and combat problems acted out on the projection screen, which may or may not require the use of the weapon. The multipurpose trap has electric turning targets which can hold up to five targets and accommodate up to three shooters, depending on the course of fire selected.

Another target trap is a small, single target with an electric turning mechanism. These traps may be interconnected multi-





Both the multipurpose target trap and the single target trap can be used indoors.

ples as required and are suitable for conducting courses of fire available on the multipurpose trap except for the International rapid-fire course and projected moving targets. This trap may be installed in locations too cramped for the multipurpose unit.

Motion Picture Targets

On the multipurpose trap, moving targets are projected on a retractable screen by an 8-millimeter cartridge-fed projector. Projected films are instantly stopped at the sound of a shot by a sound-sensing device on the projector. Trainees and instructors can then evaluate both shooting skill and judgment in the use of the weapon. The Air Force Film Library currently stocks six 5-minute films to support this training program. Three of the films illustrate silhouettes which present targets moving with increasing speed and complexity. Other films present security and combat problems which require trainee evaluation and frequent use of the weapon.

These films are only the beginning of a growing library of training films of this type. Additional films can be developed as individual command or specialized agency requirements are identified.

The flexibility of this equipment in small arms training, and its adaptability to a variety of training needs, will prove to be an invaluable training aid to the small arms instructor. Authorized pellet gun training equipment permits installation of a shooting range in combat crew alert facilities, security and law enforcement standby and training facilities, small arms instructor classrooms, and other varied locations. This equipment will provide a more flexible means to teach shooting fundamentals, and an opportunity to conduct training using moving targets which require problem evaluation. Projection-type moving target training has never before been available except in highly specialized FBI and police training facilities. It will provide a means to bring the training to the student.

Increasing Interest

While pellet gun shooting has been a serious pursuit in Europe for a number of years, it has only in recent years been taken seriously in the United States. Advancements in the design and quality of pellet guns, along with development of the improved pellet trap designs are stimulating increasing interest. Pellet training procedures are now in active use within the FBI, Office of Naval Intelligence, OSI, and a growing collection of city and state police agencies. The National Rifle Association is preparing to announce a new Postal Pellet Gun Competition Program designed to reach combat crews, security forces, and other military groups.

Effective use of authorized Air Force pellet gun training equipment, now under central procurement by Air Force Logistics Command and being delivered this year, can open the door to a new era of marksmanship training for the Air Force. The operational safety and effectiveness of this program can be enhanced by the corps of trained small arms instructors throughout the Air Force. The imagination, initiative, and interest shown by small arms instructors will dictate, to a degree, the contribution this program makes toward development of improved shooting skill by the Air Force military population in general.

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