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THE MAN**

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SNAP SHOOTING AND ANIMATED TARGETS
CONCERNING THE AUTOMATIC RELOADING
INFANTRY RIFLE

MORE ABOUT THE REAL "OLD TIMERS"
Col. Burns and Edward Hovey

NOTES AND COMMENT ON VARIOUS THINGS
By Walter Winans

BOOK NEWS AND REVIEWS

EDITORIALS and
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VOL. LXIII, NO. 19



FEBRUARY 2, 1918

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ARMS AND THE MAN

Advertising Department

Washington, D. C.

ARMS AND



THE MAN

The Official Organ of the National Rifle Association of America

Volume LXIII, No. 19

WASHINGTON, D. C., FEBRUARY 2, 1918

\$3 a year. 10 cents a copy

Snap Shooting and Animated Targets

By "SNIPER"

UNTIL the central School of Musketry, soon to be put into operation by the army becomes an established fact, the courses of fire to be used in training rifle instructors and snipers must remain matters which cannot in detail be spoken of with any authority.

Yet, judging by certain innovations which have been made in rifle practice since the coming of war, and from the fact that the trained sniper has no unimportant part to play in the fighting of modern times, it is safe to assume that any system for training expert individual shots will be based entirely upon, or partake largely of, snap shooting.

In undertaking to teach snap shooting the army is faced with the problem of selecting a suitable target. Manifestly the targets which have worked so well for deliberate fire will be entirely unsuited for the new work. Nor is there in use either in the United States or abroad, among military forces, any target which fills all the requirements of snap shooting.

While the United States army in the past has specialized on various forms of deliberate fire, to say nothing of the so-called field firing and while some little attention has been given to the problem of rapid fire, snap-shooting, especially that kind which is demanded of the soldier in the trenches and the sniper, has apparently received only perfunctory thought and effort. Still from time to time various forms of moving and bobbing targets have come into being.

In England, prior to the war, much the same condition prevailed, if one excepts the Running Deer target which was and still is so popular with Bisley shots.

The Running Deer was introduced in the United States at Creedmoor in the early days of that range. Military shots who tried it were largely unsuccessful in registering hits upon the rapidly moving target. For this reason few practiced on it, and it was finally abandoned.

Therefore through the years which have followed whatever attempts have been made by the army to develop snap shooting have had mostly to do with the bobbing target, and no target has ever been adopted which is either suitable for snaphooting or which possesses to any marked degree educational value in this phase of marksmanship.

Even as recently as a few months ago, when the Army made a belated attempt to encourage proficiency in rapid fire through the promulgation of "Special Course C," the target equipment prescribed was pitifully inadequate. It consists merely of cutting off the E target 12 inches from the top to make what is known as the "Head Target." Now considering the value of this device in developing proficiency in snap-shooting, this makeshift is not quite as good as a tin can swinging to a string would be; and even if the head target were operated as a bobbing target, much would remain to be desired.

Of course nobody believes that the amputated E Target or the unsatisfactory bobbing target will be relied upon by

the Army to furnish a means for instructing men in rapid fire or in snap shooting. Even the Solano system, in use in England, would be of far greater practical value, although this system cannot be said to meet all requirements. So there is every likelihood that a more improved and consequently a more satisfactory method will be worked out, for there can be little question that training in rapid fire and snap shooting must be made a prime consideration on the cantonment ranges if the United States is to win the war with bullet and bayonet. Still, to be of any practical use, the practice in these types of fire must be so conducted as to parallel conditions to be met with in actual fighting.

In outlining courses for the rapid fire and snap shooting practice which is sure to come, the officers of the United States Army will be called upon to pay particular attention to several very specific and very necessary qualities which must be present in any target before that target can be made of maximum military value. Here are some of the specifications:

The target must be animated—not merely moving or bobbing—and its animation must reproduce the natural movements of an enemy.

It should present a distinct or an indistinct mark according to the lights and shades which enter into the problem of placing shots in the field.

The figure at which the shooting is done should appear to the marksman in its proper proportions, according to the distance from the rifleman to the mark.

The marksman should be able to see where his shots strike—both hits and misses, in order that he may make correction for those that do not go true.

Together with these major requirements, none of which have ever been met by the bobbing target, there are a host of other details attention to which can be made to contribute to an accurate simulation of war conditions.

That no ordinary target can be made to supply these necessities, seems self-apparent. A new trail must be blazed, and the men who will be charged with training the National Army in the use of the rifle must, of necessity strike out into new fields. One plan which presents unlimited possibilities is the adaptation of the motion picture to the needs of the rapid fire and the snap-shooting range.

The "movie" has already invaded the cantonments of the National Army. By means of a combination of the ordinary "educational type" of motion picture and animated films, the theories of bayonet fighting, bombing, the manual of arms, the use of gas and gas masks, and the handling of small arms, including a portrayal of the mechanism of both rifle and pistol, are being taught to the new soldiers. Official reports indicate that this system is meeting with a very marked degree of success. Wherefore it will behoove those directing the troops in actual

rifle practice to consider whether the motion picture cannot be made to furnish the kind of rapid fire and snap shooting target which is so urgently needed.

The basic idea of using the motion picture for a target is not new. Here and there for the past few years have appeared reports of experiences along this line. In the early days, however, the systems perfected did not prove practical, inasmuch as there was no way to tell on a rapidly moving film just where a shot did strike in relation to a constantly changing figure. But the germ of the idea was there.

Within the past year or two a device was perfected which stopped the film upon the impact of the bullet on the screen. Yet the first of these devices were not satisfactory, it being a difficult matter to check a picture changing at the rate of sixteen positions per second, in time to make certain that the target presented on the screen at the moment the shot was fired had not changed materially in the three or four positions which followed before the projector was halted.

Then came a device which checked the progress of the film almost instantly—at least as nearly so as possible. With sixteen positions passing before the projecting lens per second, the film with this device was halted on the position following that occupying the screen at the moment of the bullet's impact.

With the advent of this improvement, the practicability of motion pictures as a target was assured, to the extent of using them in commercial galleries, for practice in shooting game, or for mere sport.

With this as a basis, considerable attention has been paid to perfecting the motion picture target for military purposes and recently it has been so greatly developed that it apparently meets every need of the target which is to be used for snap shooting.

As the military animated motion picture target stands today, it is a thoroughly practical outfit, but a very little more expensive than an ordinary "movie machine," and almost unbelievably simple, both in construction and operation.

Let us take a typical range. The operator's box, where the projector is installed is located back of the firing point, with a raised platform immediately below it where an officer, instructing a squad of shooters can sit with levers controlling the entire system under his hand.

Below this control station is the firing line. There the recruits to be instructed can either shoot from the standing or kneeling positions, or by using a platform still farther in front can fire prone from behind sand-bags.

Let us suppose that the first class

of recruits are very new to the game—not even trained in deliberate or rapid fire at a stationary target. On the screen at the other end of the firing line, is thrown a slide representing a bank of 6 targets. They appear reduced to the proper size for shooting at 200 yards. The men are called in turn to shoot a string from .22 calibre gallery rifles. As each shot strikes the target a spot of light appears; attendants are not necessary, and there is no hauling back of targets to spot the shot. Instead, if so desired, the officer can plot the shot on a score-book sheet, and can coach the man for his next try. When all targets have been shot on, the officer simply throws a switch, starts a motor which works on the screen, and the bullet holes disappear, leaving the targets clean for the next squad.

Now take a class in snap shooting, presuming that the officer in charge has studied the film to be used and familiarized himself with it. Perhaps the film shows a long low line of breastworks, and No. 1 man of the squad is up to shoot.

"They're coming over the top!" cries the officer in charge. "Get the leader!"

Over the line of trenches surges a mass of men. A little beyond the rest, and an indistinct target because the camera was perhaps 100 yards away from its subject when the pictured charge began, a man is running. He is not coming straight. He zig-zags first to one side and then the other. No. 1 man throws up his rifle, lines his sights and pulls. Snap! Almost with the spiteful spit of the smallbore the picture stops. If the shot has been a good one, a tiny point of light shows where the bullet struck its mark. If the shot was a bad one, it shows above the mark, or to the right or left. For five seconds the spot of light shows. Then it fades away. The screen is ready for the next shot.

When one is shooting at the moving picture target there is no time to think about flinching. Even the rifle is forgotten. Shooting becomes the reflex action, the instantaneous co-ordination between hand and eye, that it should be. All the shooter seems to realize is that something is moving toward him—something that will vanish in a moment, *and that must be stopped*—for that's the game. The same psychology that makes the men in the audience of a photoplay house forget his detachment and compels him to live every one of the rapidly changing scenes on the screen, drives the shooter to throw his gun to his shoulder and loose her off. The secret is that *the target is real*.

It is one of the most fascinating forms of gallery practice, nor is there any derth of subjects—a battery of artillery gallops up, takes position, un-

limbers and opens fire; an infantry column advances in open order by rushes, taking cover and firing as they come; an invasion by sea is in progress, and troops are landed from small boats; a lone rifleman is stationed on a hill-side moving now and again from cover to cover—there are thousands of subjects and each capable of a valuable variation.

From time to time, as the motion picture target developed, a good deal has been written concerning it. But the equipment as now designed for military use, is far different from that which was first put into operation. Also because of the fact that the motion picture may play an important part in training our National Army, a brief description of the outfit may not come amiss.

Since the secret of the whole system lies in the special screen, any discussion of the military animated target should start there. The screen, technically may be called the target and back-stop.

A cursory examination of the screen from the firing line, shows little difference between it and the ordinary motion picture screen. But there is a vast difference. The screen is made of tough white target paper. The paper is operated as a continuous web passing upward from the main feed roll over a roller at the top of the screen, and then down again to a third roll. The paper is so adjusted that the two thicknesses work one against the other—the first moving upward, and the second moving down which opposed motion results in the rapid closing of all bullet holes. From the third roll the paper is passed over other rolls located one foot back from the front surface, and thence upward, creating a space between the screen and the back-stop known as the light gallery, for which the white waste paper forms an excellent reflector for the powerful electric bulbs the rays from which strike through the bullet holes and mark the shots.

After doing duty as a reflector, the paper continues over other rolls to and between compression rollers driven by a small motor. This motor is coupled to a series of speed reduction gears which impart a very slow motion to the entire web. The action of the web movement is under the control of the officer at the firing point, and consequently the paper is in motion only when the men are shooting; but even so, the rollers, if constantly in operation for an hour, will consume only 7 feet of paper.

Behind the screen proper is the back-stop. This consists of a series of narrow steel plates, fixed horizontally to the back-stop frame. Some one of the steel plates, which overlap one

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Concerning the Automatic Reloading Infantry Rifle

By E. NEWITT

THE combination of virtues developed in a small arm and its cartridge have two well defined objects; hitting efficiency and killing efficiency. The first is dependent upon a suitable adaptation of the weapon to the physical characteristics of the soldier, i.e., lightness and good fit, absence of recoil, good sights, trigger pull, an easy and rapid functioning action; and upon ranging capability, flat trajectory and precision.

As hitting is a precedent to killing the latter is first dependent upon the foregoing elements of hitting efficiency and then upon the size and energy of the bullet. Most of these elements have been developed in modern infantry small arms to a high degree; nevertheless infantry fire in war is found to be effective rather in proportion to the amount of ammunition expended than to the qualities of the rifle, and in any case if the fire could be so accelerated as to make one rifle do the work of two, fire effect would be greatly increased.

With some such object in view it is sought to accelerate loading by means of some recoil- or gas-operated reloading mechanism, other features being retained with as little change as possible. Among the nations that have invited the assistance of the rifle making industry in this connection is the United States, which some few years ago specified its requirements in memorandum circulated amongst rifle makers.

In common with others, the military savants of the United States are obviously of opinion that acceleration of fire may be achieved by more rapid reloading, and have specified the present Springfield 1906 model cartridge as the ammunition to which the prospective auto reloading rifle must be adapted. No such rifle of sufficient merit to justify adoption has yet been forthcoming, nor, it may confidently be suggested, is it likely to be, for the reason that no appreciable acceleration of fire by such means under such restrictions can be achieved.

Of the many operations involved in firing, reloading the chamber is already the most rapid, aiming and recovering from the disturbance caused by recoil are the slowest, while recharging the magazine involves an amount of time which is quite an element in the rapidity of sustained fire. In presence of the restriction involved in the requirement to adapt the prospective rifle to the Springfield cartridge, re-

coil cannot be diminished save by an increase in the weight of the arm quite out of the question, hence the longest of the operations in firing cannot be shortened. Similarly as the size of the magazine is necessarily limited, it is not possible to reduce the number of recharging operations by increasing the capacity of the magazine.

Solution of the problem is a matter of ballistics rather than mechanics.

In the National Rifle Association contests at Bisley, England, a few years ago the writer saw a man fire 108 shots in a minute from an automatic reloading rifle all of which struck a target four feet square at 200 yards; and has himself in an experimental study of the problem frequently fired over seventy shots a minute. Herein is evidence conclusive of the human possibility of loading and firing with the requisite accuracy at a speed which exceeds all conceivable requirements from an existing rifle which has been a regular marketed commodity for fourteen years. This rifle is the smallest of a series which includes several larger calibres. Similar experiments with the larger calibres indicated speed possibilities exactly proportioned to recoil and the cartridge capacity of the magazine and left no room for doubt that *the problem of accelerating fire is primarily concerned with recoil and the size of the cartridge.*

The formidable nature of the problem under discussion becomes more apparent when the present rapidity possibilities of the fire of well trained infantry is considered. The Short Lee Enfield rifle with its ten-cartridge magazine and action which cocks the mainspring on the drive home of the bolt, is easily the most rapid hand operated rifle. With it the writer has seen an infantry squad fire fifteen rounds per man in thirty seconds, a single Sergeant fire forty-five rounds in one minute, and an entire company fire 152 rounds per man in 14 minutes, and, as this was in matches calling for accuracy as much as speed it indicates speed possibilities by no means easy to beat. Doubtless the present war has furnished many instances of rapid sustained fire exceeding the last, which was suspended on account of the stocks taking fire, an occurrence which suggests that any further acceleration of sustained fire will call also for some effective means of dissipating the heat generated by the explosions.

Another important feature involved

is that of the cartridge-carrying capacity of the soldier. An addition of about eighteen pounds to the weight of his rifle and other equipment would enable him to carry 300 Springfield cartridges, and it is a fair inference that with accelerated means of fire a larger supply of cartridges will also be necessary.

From every angle the problem is approached the necessity for lighter smaller cartridges as a condition precedent to its solution enforces itself, and the question remains: What is the minimum adequate to military requirements? The small arms cartridges at present in use include calibres between .32 and .25, velocities between 2000 and 3000 feet per second and bullet weights between 250 and 150 grains, and the highest velocity is usually associated with the lightest bullet. The foregoing indicates wide differences of opinion as to what combination is best adapted to military needs. Though every change in the last century has been in the direction of lighter bullets and increased velocity, some hesitation in further diminishing calibres is apparent, the Germans, for example, having the largest and also the lightest bullet in proportion to its calibre, thereby sacrificing some ballistic quality to the maintenance of calibre.

To reduce recoil without increasing the weight of the rifle demands reduction in either the velocity or weight of the bullet. Reduction of the velocity is inadmissible on many most important grounds, while reduction of weight would involve diminution of striking energy and danger zone unless balanced by an increase of velocity. We are left therefore with the only alternative capable of restoring the balance—the reduction of weight and calibre coupled with a corresponding increase of velocity, a process which will involve considerably higher working chamber pressures, but, on the other hand, will greatly flatten trajectory, increase the danger zone, and striking energy, lighten the cartridge, reduce its size, and increase the number within the soldier's carrying capacity.

There appears to be but one objection to smaller calibre and that based rather upon conjecture than proved fact. Somewhere about 1857 the British Small Arms Committee rejected the .45 calibre Whitworth bullet weighing 480 grains on the ground

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BOOK NEWS AND REVIEWS

IN the famous French "Seventy-Five" is to be found one of the most interesting and important contributions to modern warfare.

Other engines of death which have had their bloody baptism along the European battlefields, such as those armor-plated monsters of No Man's Land, the tanks, and the great bel-lowing 42 centimeter Hun artillery, are more spectacular. Yet while the tanks have trundled across shell-cratered fields, and as in the instance of the attack on Chambrai done wonderful work, and while the immensity of the Big Berthas created a profound impression when their ponderous projectiles burst on an astounded world at the beginning of hostilities, the light artillery of the French forces more than anything else has enabled our allies to hold their ground against the wave of German invasion.

Now, when the United States has become a belligerent, although poorly off for modern armament, the French "Seventy-Five" has been supplied to our forces by the government of France. By virtue of all of these things, the little rapid fire field gun should and does hold a marked interest for the people of this country. Therefore one of the most timely contributions to the literature of modern ordnance is "The French Seventy Five," by Lieutenant Frank H. Canaday, which has just appeared from the press of the Banta Company, of Menasha, Wisconsin.

Lieutenant Canaday's work is a translation from the original of M. Th. Schoesing, Jr., and for the first time a comprehensive description of the gun, together with a delineation of the qualities which have made it of unusual importance, are presented to the casual reader.

It is doubtful whether one who is not familiar with the development of field artillery appreciates the wonderful advances embodied in the "Seventy Five."

During the past twenty years almost unbelievable strides have been made in the development of infantry and cavalry weapons. Not so, however, in the Field Artillery until the advent of the French gun.

Two score years ago, even the most advanced of field pieces consisted principally of a metal tube, fastened by two trunions to a gun carriage. The gun was sighted by a clumsy device which raised or depressed the muzzle. After each shot was fired, the piece recoiled, the cannoneers were forced to drag it again into position, and the gunner had to re-lay his sights after

every discharge. This manifestly was a tedious method, and worst of all was in vogue at a time when the requirements of field artillery called for rapid fire.

And so it was, according to Lieutenant Canaday's book, that the now famous Seventy-Five came into being as the work of Captain Sainte-Claire Deville and Captain Rimahiho, who had perfected and materially improved the work begun by Lieutenant-Colonel Deport.

The chief features of the Seventy Five are its immobility, the recoil being so well taken care of that the position of the carriage is scarcely altered; its rapidity of fire; a sight detached from the tube of the gun; projectiles which while small in diameter and light in weight are particularly destructive, and a possibility of using the gun almost under any condition for indirect fire—that is where the gun is itself concealed and protected from the enemy, and consequently, in most instances, the enemy concealed from the gunners and protected against direct fire.

The French "Seventy Five" as described by Lieutenant Canaday, is a trifle more than 8 feet long, its length being 33 times its bore which is 75 millimeters or about 2.95 inches. It is rifled inside and reinforced by a hoop-like breech-casing and a bronze jacket. The mechanism of the breech contributes much to the value of the gun, as it can be worked rapidly and safely, the firing pin being held from the primer in the shell, unless the breech is properly closed.

Although the ammunition used develops a tremendous recoil, the shock is entirely taken up so that firing the "Seventy Five" does not disturb the position of the carriage. This is partly accomplished by a "spade" at the end of the trail, and "brake shoes" on the wheels which dig themselves into the ground, but the principal recoil absorbing mechanism is found in a hydro-pneumatic brake upon which the gun rests.

In a detached sort of way almost everyone who has read the accounts of fierce hand-to-hand fighting along the western front has realized that the acme of brutality in combat has been reached in the present war.

Yet some little book like "Hand-to-Hand Fighting," by A. E. Marriott, Camp Physical Director, Army Y. M. C. A., Camp Sevier, S. C., is needed to bring home with full force the "kill-or-be-killed" character of the struggle into which our National Army must go.

Director Marriott's book is described as being "A System of Personal Defence for the Soldier," and as such it is a remarkably interesting little volume, profusely illustrated with plates which give a comprehensive idea of the skill in rough and tumble fighting the soldier must attain before he can feel himself fully equipped to meet his foe in the shock of battle. The book is published by the Macmillan Company, of New York.

To one who is not prepared to admit that a man may go to any lengths in fighting to preserve his own life and disable an opponent, the book will come as a distinct shock. To say the least, it is unpleasant to contemplate gouging out the eye of an opponent, kicking him in the groin, stamping upon his neck, or staving in his ninth rib. But those who have served in the hell of the trenches know that these points of attack, although associated with "dirty fighting" back home, can and must be counted upon by every man who goes "Over the Top" to help him emerge alive, and it is with these points of attack and sundry others, including the most effective holds of the jiu-jitsu system and the system used by the Graeco-Roman wrestlers that the book deals.

The reasons for advocating fighting of this character, and the necessity of training our men in rough and tumble dirty fighting, can best be seen in the preface of Marriott's book, written by Benjamin S. Gross of the Welfare Department, Camp Sevier. He says:

"In an article 'Bayonet Fighting and Physical Training' in the August, 1917, number of the Infantry Journal, Major Percy Hobbs of the Canadian Forces writes that 'after a bayonet attack, in nine cases out of ten (trench or open) the men grapple. The man who has never been there before, does not know what to do. He has been practiced in shortening arms and jabbing, disarming his opponent and a lot of counters and trips and tricks. Well, your average trained men tie themselves up in a knot, roll about on the grass and forget everything!'

"Major Hobbs is but one of the many military writers who have emphasized the necessity of every infantryman knowing what to do when he meets his enemy in hand-to-hand encounter. Not since the middle ages has a knowledge of this method of fighting been so essential as it is today.

"As the great war progresses, it is becoming more and more apparent that the expertness and skill of the individual are playing an increasingly large part in the determination of the final outcome.

"That events have taken this turn is perhaps the fortunate thing from

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More About the Real "Old Timers"

COL. BURNS AND EDWARD HOVEY

WHILE Thaxter was hanging up unusually excellent scores with the military rifle in Nevada, and Bell was making rifle history in Tacoma, Washington, two Californians were doing their share in developing the military rifle game.

They were Col. H. J. Burns and Private Edward Hovey of the California National Guard. Both men were conceded to be exceptionally good shots, and the work which they did in the early days unquestionably exerted an influence upon the match rifle shooting game of the Pacific Coast.

Unfortunately the records of shooting in the far west do not appear to have been as carefully preserved as those of the eastern ranges, and often the account of a victory simply states that the winner was victorious over such-and-such a number of competitors, or that his average in shooting during a stated period was such-and-such a percent.

Nevertheless the work done by Burns and Hovey was of such a character that even the scant records of their firing line activities are worth perpetuating.

Riflemen whose memories of the game go back to the Sixties, will recall the California Team which came to Creedmoor in 1867 and carried away with them the Military Trophy. Veterans of Creedmoor were wont to declare that this team was composed of the finest physical specimens ever gotten together in one straight shooting organization.

Among the Californians who visited New York on that occasion was one who stood 6 feet, 3½ inches tall, weighed 215 pounds and was physically excellently proportioned. This man was Col. H. J. Burns of San Francisco, a native born product of the Maine woods where he learned the rifleman's art at various turkey shoots when very young.

Colonel Burns was at the height of his shooting career the inspector of small arms practice under General W. F. H. Barnes of the California National Guard, and was one of the foremost exponents of military rifle shooting in the west.

In 1874, Burns purchased the first long range military rifle—a Remington—which was ever sent to the Pacific Coast. He made unusually excellent scores with this arm, recording 90 per cent totals at 1,000 yards during that year. His favorite sport during

that period was to place a live turkey in front of the 1,000 yard bull's-eye and try his skill at hitting the bird. He was surprisingly successful at this game.

On January 30, 1879, an endurance match was arranged between Burns and Officer Burdick of the San Francisco Police force. The match called for 100 shots at 200 yards, off hand, Creedmoor target, U. S. Springfield rifle with 6-pound trigger pull. The match resulted in a score of 433 for Burns and 387 for Burdick.

Some of the high lights in Colonel Burns's record many of the details of which have been lost, include the following:

In July, 1874, he consistently maintained a 90 per cent record in Alameda County at the 1,000-yard range.

In August, 1875, in a match of 12 men, at 200 and 500 yards, Colonel Burns won over 12 men on an average of 87 per cent.

In October 1875, in the first long range match the California Rifle Association ever staged Burns won first place against 18 competitors.

In June, 1876, he shot in the First California Regimental Team and led the score. Following this he shot against the best man in the other regiment, and won, which victory brought him the Second Brigade Medal.

In December, 1876, in the match for the California Powder Company Cup, calling for 10 shots at 1,000 yards, Burns won the trophy for the second time, against 14 competitors.

Colonel Burns won a place in the Creedmoor team to represent California, and at New York, his average was 84 per cent. At an exhibition for the benefit of the Creedmoor Team at Woodward's Gardens, New York, all shooting at a reduced target, Colonel Burns made the highest score and followed it with a total of 21 out of 25, trick shooting with his back to the target.

Among the most accomplished shots in the California National Guard was Edward Hovey, a member of the staff of the San Francisco *Chronicle* and a private in Co. G, 1st Regiment, C. N. G.

Hovey was a native of Norwich, Connecticut, where he was born in 1860. Having moved to the Coast when quite young, he began his shooting career in the West, and by the time he was 26 years old his work was attracting considerable attention. At that time Hovey was far from being the giant that Colonel Burns was, standing but 5 feet 5 inches tall and weighing only 125 pounds.

Although slight of build, Hovey confined his shooting either to military rifles or rifles with open sights and which were not cleaned after every shot. Much of his best work was done with the "old reliable" .45 Sharps and the Springfield, but he also used the .44 Winchester.

The ammunition which Hovey used in his military rifles was: for 200-yard shooting, 60 grains California Quail Shooting, No. 3, a brand manufactured at that time on the Pacific Coast, and a bullet weighing 460 grains, manufactured by J. E. Klein, of San Francisco; for 500-yard shooting, 65 grains of Hazard F. G. powder and the Klein 460-grain bullet.

In shooting, Hovey used the elbow-rest position approved by so many military riflemen. From 1883 to 1886 Hovey did some excellent work, much of it being done at the old Shell Mound Park Range, Berkeley, California.

On February 1, 1883, Hovey, using a .44-calibre Winchester, fired a 50-shot match against Nicholas Williams, who used a Sharps' Military. In this match Hovey scored 221 against Williams' 214.

On December 3, 1883, at Shell Mound, he again shot against Williams in a 50-shot match, this time both contestants using the Sharps-Borchardt with a 6-lb. pull, and Hovey made 230 against his opponent's 213.

In 15 shots at 200 yards, during the course of an infantry team match at Shell Mound, on February 3, 1884, Hovey scored 66 out of 75, and on February 23 of the same year he won a 5-shot match at 200 yards against nine competitors on a score of 23 out of 25.

On July 13, 1884, at Shell Mound, in a 100-shot match, Hovey scored 452 points, and a week later in the Fifth Infantry 100-shot match he won the competition with a Sharps-Borchardt rifle, 6-lb. pull, by scoring 456, which stood as his best 100-shot record.

Hovey made his first clean score at 200 yards on September 14, 1884, with the Sharps Military, when he hung up ten consecutive bull's-eyes at the Shell Mound range.

On October 20, 1886, at Shell Mound, in a 50-shot match, Hovey made five consecutive scores of 46 each, winning the match.

Hovey's best 30-shot score was made at Shell Mound, December 20, 1885, when he totaled 143 out of 150 against A. Johnson, of Co. G, 1st Regiment. In this score there were 21 bull's-eyes in the first 21 shots.

ARMS AND THE MAN

1110 WOODWARD BUILDING. WASHINGTON, D. C.

EVERY SATURDAY

Editor

BRIG. GEN. FRED H. PHILLIPS, Jr., Secretary N. R. A.

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KENDRICK SCOFIELD

Entered as second-class matter, April 1, 1908, at the post office at Washington, D. C., under the Act of Congress of March 3, 1879.

That the man shall serve his country in time of war is noble, brave and patriotic; but that a man shall properly prepare himself in time of peace to serve in war is all of these things and more. It is noble with a nobility which is real, not ideal. It is brave with a bravery which assumes in time of unemotional peace many burdens, among them that of bearing the lack of appreciation of those who do not consider military preparation or training necessary.

THE CIVILIAN CLUB AND THE PUBLIC SCHOOL

ONE of the most valuable things that the members of any civilian rifle club can do—next to instructing in the use of the rifle men subject to military service—is to foster enthusiasm for rifle shooting in the public schools of the country.

A very large percentage of educational institutions in the United States already include rifle practice in their curriculums. But, unfortunately, there remain many institutions the faculties of which are either indifferent, or lukewarm, to the advantages of including target practice in school activities.

Men who are in charge of growing youths, who to a large measure exert upon their pupils a marked influence, ought to be the kind of men to whom rifle practice appeals. If they are not, there is something wrong. Either they are of the type that is blind because they refuse to see the trend of events, or they have never had an opportunity of learning just what excellent qualities can be developed by competitive rifle shooting. In either event, they need attention. If the faculty members of a school are blindly prejudiced against rifle shooting, this fact should not operate to deprive the boys of a fine, manly sport. Some way should be found to interest the boys outside of school. If the faculty is simply uninformed, no time should be lost in informing them and in convincing them that an indoor gallery would be the greatest possible addition to the school equipment.

There is nobody better fitted to undertake this work than the members of a good up-to-date rifle club. The members of civilian clubs have already done a great deal of "missionary work" in the shooting game. If they hadn't the game would have been dead long ago. Much that has been accomplished was made possible only because the members of many clubs have devoted much time and effort and in many instances considerable money, to spreading the shooting gospel. This is all as it should be. Any enthusiast who is worth the name should be willing and anxious to interest others in his hobby. This,

of course, does not apply to the few "paper rifle clubs" that are dragging out dull and inactive existences and worth little to their members and nothing to anybody else. Fortunately a large majority of rifle clubs are "up and doing" organizations.

Now as to the way in which the problem presented by the school can be approached—

The chances are that there are many civilian clubs located in towns where the high schools pupils are not encouraged to learn how to shoot. The officers of these clubs should get in touch with the faculty of such schools, find out why there is no indoor gallery, and get to work to stir up enough enthusiasm to insure one.

If the members of the faculty are of that dead-alive breed that frowns upon the burning of powder, set about converting them. Invite them to the club. Show them that rifle shooting is just as much a sport as baseball or football. If that fails, spread the word among the pupils that they will be welcome at stated times on the civilian club range.

But perhaps the members of the faculty are in favor of rifle shooting, yet know so little about the game that they do not know how to go about building an inexpensive range and operating it. If this is the case, volunteer to act in an advisory capacity, help put in a range and then volunteer to instruct the boys.

It makes no difference that universal military service for all males in the United States is apparently just below the horizon. The real vital thing for the rifle clubs to do nowadays is to put forth every effort possible to "catch the boys young" and instill into them a love of the shooting game.

Why not organize a "Junior Club" in connection with every civilian club in the country, bringing in boys under eighteen, and permitting them to affiliate with the N. R. A. as a boys' organization? If this were done, the youngsters who now shoot at haphazard, learning to handle the rifle as best they can, could be grounded in the principles of rifle practice by men who know how to shoot.

There are, of course, hundreds of schools where rifle shooting is not only approved and encouraged, but where it is made part of the regular course. There is no missionary work needed in such institutions. But often the faculties of such schools would be glad of help from civilian rifle clubs in staging competitions among the boys.

There is a great big field for rifle club activities in connection with the educational institutions of the country.

Civilian riflemen, "get to it."

FIGHT THE ANTI-FIREARM LAW

THE report submitted by A. C. Hurlburt of the United States Revolver Association's legislative committee upon the occasion of the annual meeting only serves to emphasize the need of eternal vigilance on the part of all revolver and pistol shooters of the country in preventing the enactment of insane laws of the Sullivan type.

Although it labored under great handicaps, the legislative committee was able to forestall the enactment of many of these laws last year. This year, well equipped to carry on its work, the committee will no doubt render even more signal services during the coming twelve months.

There is, however, one thing necessary to insure the success of the committee's work. Before the committee can use its influence to defeat an insane bill or to have it so amended that it will protect the rights of civilian shooters, its members must know when and where such legislation is presented.

Mr. Hurlburt, in his report appealed to the members of the U. S. R. A. to see to it that in every state capital some U. S. R. A. member is detailed to watch the legislature, ascertain when anti-firearm legislation is presented, and notify the members of the legislative committee.

This is an important matter, although no difficult one. It should therefore receive immediate attention. It is, however, equally true that what is everybody's business is nobody's business. Therefore the U. S. R. A. clubs in every state should get together, canvass the field and select a good live member to look after this end of the U. S. R. A. work.

The trouble with most of the bills which seek to prohibit the possession and use of firearms is that they make no distinction between the law-abiding householder whose

constitutional right it is "to keep and bear arms," or the sportsman who finds clean recreation in pistol and revolver matches, and the thug who arms himself for lawless purposes.

Neither the U. S. R. A. nor the shooters of the country desire in any way to interfere with the enactment of a law when that law will operate to restrict the possession of firearms by the lawless element, and to prevent their use for criminal ends. Unfortunately, however, the average law offered for this purpose makes no distinction in its application. As a result the law-abiding club member finds himself in the position of abandoning a proper and fascinating sport, or assuming the status of a law-breaker.

There seems to be no way of preventing the passage of anti-firearm laws that interfere with clean sport other than by educating the sponsors of these laws to the difference between insane legislation and proper legislation. But this can be done. It should be done. Within the next few months at the most the U. S. R. A. should be able to count upon the services of one or more "reporters" in each state capital to keep the legislative committee advised on pending laws.

Notes and Comment on Various Things

By WALTER WINANS

London, England, Dec. 20.

ILLUSTRATIONS of various very complicated sights which were presumably meant to facilitate shooting at moving objects from an aeroplane were given in the story "Sights for the Air Duellist," by Stephen Trask in the issue of December 24, 1917.

It is curious how the impression gets about that complicating sights makes hitting a moving object easier. The only explanation is that the men who design these sights have had experience only with stationary targets, and that they forget, or are ignorant of, the fact that all we who shoot big game or use the shot-gun at game or clays know that "swing" and "timing" are the secrets of success in hitting moving objects and that the sights should be as simple as possible—merely a big white globe for the front sight and a semi-circular notch for the rear sight.

Let anyone fit on his shot gun one of the sights that are now in use, as illustrated in Mr. Trask's story and try to hit clays using it—especially the one which has an *aperature front sight and a rear sight of an upright rod*—and see how many he misses out of a hundred.

The difficulty about military sights for rifles for use at moving targets is that they are invented by *stationary target*, and not *moving target* shots. When a government finds that men cannot hit moving objects like aeroplanes, instead of putting the men to work shooting at clay pigeons with

shot guns to teach them "swing" and "timing," they at once ask so-called "experts" to design rifle sights which will mechanically assist the shooter in hitting.

These "experts" are, of course, men chosen for having made highest possible scores at stationary targets (practical game shots are never asked).

These men have never fired a shot at anything moving in their lives, and they, in order to do extremely accurate shooting at stationary targets, use spirit levels, micrometer screws, magnifying glasses, etc., thinking this all is necessary for shooting at moving objects.

They invent, by theory, most complicated things to fit on the rifle, to do away with having to aim in front of moving objects which entirely destroy all swing and timing and prevent a man ever from becoming a good wing shot.

I am speaking from knowledge. The "running deer" target has been in existence at the English National Rifle Association for some sixty years and I do not think a single winner of the military long range prize has ever won even the very lowest down prize, even for novices at the "Running deer." Yet such men are the ones asked to devise sights for shooting at moving objects. The more soldiers are encouraged to do clay pigeon shooting the better.

No airman should be allowed ever to shoot a single shot at a stationary tar-

get; he should be made a wing shot. Stationary target shooting spoils a man's swing and timing.

Now as to the story on "Crow, Hawk and Vermin Shooting" with the rifle. This seems to me to be very curious and to contain many mistaken ideas. To begin with, dogs and cats should never be shot. It only leads to unpleasantness.

A keeper shot the cat of a poor old woman in my neighborhood when the old woman had taken it out a few yards from her house. It was her pet and had belonged to her dead child. This shooting got the keeper into such trouble that he was discharged. But this is not the only reason for refraining from shooting cats and dogs. If a man shoots the pets of another man who is willing enough to help preserve game, the second man will, in most cases, kill off game and destroy nests in the future.

Now as to the killing of Kingfishers. That also should not be countenanced, for kingfishers are like humming birds, and should be preserved. They are not "trash."

Now as to the most strange idea of this writer. He advocates everyone shooting rifles at vermin. If this is done, numbers of people will be killed by accident. Imagine shooting a hunting rifle at crows perched on fences—bullets would be flying all over the place.

When the crows are nesting, wait each morning and evening when the

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Existing rifle cleaning methods are associated with hard work by way of bore scrubbing and wiping, with messy oil, and with anxiety for the whole period between cleaning and shooting again.

B. S. A. SAFETIPASTE

is largely used by British soldiers at the front. It abolishes labor because the bore has merely to be coated with it immediately after firing.

Abolishes anxiety because steel destroying powder gas deposits are immediately and positively killed by Safetipaste.

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RIFLE SMOKELESS DIVISION

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WILMINGTON, DEL.

young are just able to hop out of the nest to sit on a branch, before they can fly, and shoot them with a .22 repeating rifle. They are then easy shots and if missed can be shot at till they are hit. There is no danger of hitting people as one shoots almost straight up at them.

This is if one wants sport; if one wants to kill off the crows, shoot into the nest with a shot gun when the old bird is sitting on it.

Jackdaws can be shot, when nesting, either by watching, hidden near the nesting tree and shooting the bird as it comes to the nest, or standing by the tree with a gun and hitting the tree with a stick. When the jackdaw rushes out it can be shot.

Jackdaws dodge round to keep the trunk of the tree between you and them so it is best for two gunners to go after them, one to stand on each side of the tree, before it is struck with a stick.

The whole idea of vermin killing is to kill them at nesting time and then the eggs are also destroyed, and with shot-guns.

Doing this pleases the farmers; but

to fire a rifle along the ground and risk children being hit, or to shoot farmers' dogs and cats is only to raise an outcry against shooters.

About deer shooting here. It is curious how the public will not eat deer meat. When shooting last fall, I got a nice fat roe buck. These bucks are considered a great delicacy on the continent, being regarded there in the same light that canvasback duck or terrapin are regarded in Maryland.

I gave the roe buck to a poor old woman who had a big family to keep up, and later I asked her how she liked it. She was greatly surprised and said:

"I thought you told me I could do as I pleased with it, so I buried it in the garden, as I had no dogs to feed it to."

There was a pause in my "market hunting" when the breeding season came on and the deer were, unfit for food. Early in November, however, the shooting of hinds—female red deer—and does—female fallow deer—was resumed.

The first of this shooting I did was

in response to a request to kill 10 fallow does. I did so, but I think it was a mistake to kill them. When I had shot the 10, there were very few does left, although there were plenty of bucks. Each doe shot at that time meant the death of two deer as each doe was heavy with fawn. The young bucks can be killed off without vitally reducing the herd, and without prejudice to the stock.

Fortunately, just before I resumed shooting, I discovered 200 cartridges for my .4 calibre double rifle, so in spite of the ammunition shortage was able to make some use of that weapon. The cartridges were very old—had been thrown away years ago and re-found. If cartridges continue being as hard to obtain as they are now, I will soon have to get a cross bow and begin to use that for my meat shooting!

I finished shooting deer for 1917 in December, but will resume it again.

During the year, I shot 139 deer which were brought to market, and wounded three that were unfortunately lost. A deer now sells for \$25.

When I gave details of the list of

deer killed to shots fired with my .4 calibre double rifle, I put down two misses; since then one of the two stags I shot at (a snap shot at head and shoulders showing for a moment amongst high bracken) was found dead, but too far gone to be fit for food.

It is curious there was not any blood to be found, and I examined the ground for several hundred yards, yard by yard, all round where I last saw him.

It seems he crawled under some overhanging bracken, lay hid until I had gone past and then came out to die.

Losing wounded deer is unfortunate, but impossible to avoid, when one cannot have a dog to track them, and the whole place is covered with high under-growth; if one loses sight of a deer for a moment after the shot, it may fall dead and never be found till it has spoiled.

I thought that when the bracken was killed by the winter it would be easier to find deer, but the reverse was the case. It turned brown, yellow and red, so like the color of deer that the animals are very difficult to see. To make matters worse it hung over in arched heaps under which they could hide when hit.

I shot one hind at 250 yards range. I had to have three separate tries to see through the sights, she was so camouflaged by the bracken. I saw her moving, the first I saw of her, and when she stood, she looked almost exactly like the bracken.

I had a good look at her with my field glasses and saw the position she was standing in—head towards me with body turned to the right.

When, however, I looked through the sights I could not make out her shape enough to be able to aim for her chest. I could only, at the last attempt, select a red patch of bracken, as being a foot above her chest. I aimed a foot below this and got her right.

On two occasions I have shot two deer with one shot. In both cases, fortunately, the bullet hit the second deer in the shoulder as well as the one aimed at.

In one case one deer was overtaking the one I was shooting at, and just crossed her shoulders as I pulled; in the other the second deer was 20 yards further on and rather higher—the bullet must have glanced off the shoulder blade of the first.

There are legends all over Europe of phantom hounds which hunt in forests at night, flying in the air.

The old man who has been acting as guide to me declares he has several times heard them hunting towards him, passing over him and on, during dark nights.

I asked him what their voices sounded like.

He said "like fox hounds." He has much experience with fox, stag and blood hounds.

I should have thought the phantom hounds should have voices like blood hounds (a deep booming voice) as the

old hounds of Europe were of heavier build than modern ones and more "throaty," like blood hounds.

I wonder if there are any Indian legends of phantom wolves hunting at night overhead?

I think there must be some flocks of night birds which make a sound similar to hounds in full cry, as this superstition is universal all over Europe.

I should like to hear it, but I generally get in too early from my shooting.

Hind and doe shooting is more difficult than shooting the stags and bucks. They are more shy and after you shoot at one, the herd goes for miles. I was very fortunate toward the end of my shooting in getting seven out of one herd, by following and cutting off corners, but one of my "two at one shot" flukes helped to get these seven.

A stag was roaring yesterday, exceptionally late for them; he was chasing a hind, which I shot and she dropped so suddenly out of sight that he went round several times looking for her, and had half a mind to attack me when I went up to her.

Birds of all sorts, except birds of prey, are getting very scarce in England, and the foxes were making a great noise last night. As small birds depend on what is given them, and they are not allowed to be fed, they will become about extinct if this war continues.

Snap-Shooting—the Real Thing

By "AKERIMAN," MUSKETRY OFFICER

In *The Rifleman*

IF any readers of the previous article on "Club Shooting and War Shooting" have been impelled to commence practising the "unsteady" positions, perhaps a few more words on this subject may be of use to them. First we will deal shortly with the standing position. The musketry instructor teaches that "this position is used in firing over breastworks, out of trenches, over standing crops, and for a last shot at the enemy in the assault."

It is unnecessary to go through the regulation description of all the points to note in assuming the position. The main thing for the would-be expert practical shot is thoroughly to realize what are the most important points, and why.

Firstly, it is desirable to obtain the firmest possible grip on the ground—

a good "stance" as the golfer would term it. To this end the feet should be well apart and the knees *strongly braced back*. It is astonishing how much steadiness can be obtained from just that small point. Again, let the body be evenly balanced on both feet, not resting on one and just propped up by the other. The body should be erect and tense, not leaning forward or back.

Now as regards holding the rifle. There is no better method for all round work (assuming the rifleman to shoot from the right shoulder) than to grip the weapon *firmly*, flat down on the palm of each hand; the left at, or slightly in advance of, the point of balance, and the right at the small of the butt. Some shots adopt the American (civilian) system of lightly resting the rifle on the tips of the fingers of the

left hand, with the left elbow resting against the ribs. This is a good position for slow shooting, but is no good for quick work—and as must thoroughly be realized, all "practical" shooting is quick. No—grip the rifle with all the fingers, and swing it straight up and back into the shoulder with a thud, taking care that the left elbow comes perpendicularly underneath the rifle, and the right elbow nearly level with the shoulder. Then the left arm is in the best position to support the weight, and the right to give lateral support.

Walter Winans, the expert on sporting shooting, teaches that as the rifle touches the shoulder, *the sights should simultaneously be aligned on the mark and the trigger pressed*. This is undoubtedly the ideal thing. It is comparatively easy with a large mark to aim at—say a three-inch bull at 25 yards—and should be practiced first at such a mark. Then, as proficiency increases, the size of the mark should be gradually decreased. The *wrong* and more usual method is to start

shooting slowly at a small mark and endeavoring to increase the speed.

Let it be remembered that as the butt comes up to the shoulder it should go straight into the *hollow* of the shoulder, not on the end of the arm bone or the biceps, and it should be pulled tightly in with both hands together, the whole body stiffening, the aim being taken, and the forefinger pressing the trigger at the same moment.

For this to be accomplished successfully, the rifle should fit the physique of the rifleman. That is to say, the butt should be of a comfortable length, and the "drop" of the stock sufficient to allow the sights to come in line with the eye without any dropping forward of the head.

If it is impossible to secure a rifle which fits perfectly, as generally is the case, the next best expedient is to find out the exact position of the butt on the shoulder which best allows the sights to come into line easily, moving the butt up and down until this is found. Once found, the position should be learnt by continually practicing bringing the rifle up to the shoulder and aiming, without actually firing, taking care that the grip is properly maintained, and the forefinger placed correctly on the trigger each time. To become proficient in this exercise takes much time and trouble, but is well worth while. The muscles must be educated until the movement is performed with automatic accuracy, so that any subsequent "looking for" the sights is unnecessary. When it has eventually been mastered, all that is necessary to hit the mark is to fix the eye upon it, bring up the rifle and press the trigger. The aim is involuntary.

Given a good let-off, or trigger release, the accuracy of the shooting will then depend simply upon how near to perfection this co-ordination of the movements has been brought. The element of steady holding is practically eliminated, if the hold, aim, and let off are really simultaneous. The great difficulty is to avoid "holding on" to perfect the aim, or to allow the brain time to decide to press the trigger, and this can only be avoided, as before explained, by commencing with a large mark and gradually decreasing the size as the shooting improves, always pressing the trigger when the butt touches the shoulder, whether the aim is perfect or not.

It must be remembered that although "steady holding" or "hanging on" is eliminated, this does not mean that steadiness of the *body* is unnecessary. On the contrary, the body must be firm and motionless, in order to provide, as it were, a foundation for the arms to swing upon. The whole point is that although it is impossible to keep steady standing for any length

of time, it is possible to obtain *momentary* steadiness, and in that moment the rifle is fired, if only the movement and aim are properly timed to work together.

The rifleshot accustomed to the ordinary target-shooting form of work, upon trying this system of instantaneous snapshooting, will probably at first conclude that it is completely impossible to do it anything like well;

THE "TEMPORARY" MAN

In opening the grade of temporary second lieutenant, Regular Army, to enlisted men of excellent character and faithful service in time of peace the President has done about all that can be done for these men unless they fulfill the legal requirements as to age, education and physical condition for appointment as provisional second lieutenants. The attitude of the War Department toward this class of soldier has been as benevolent as possible under the law and in the interest of the Service.—*War Department announcement.*

"Caesar, we who are about to die, salute you!"
Of course we're highly flattered and it's quite a compliment

To be commissioned "shave-tails" in some brand new regiment;

We're glad you made us officers, so we can sit at mess

With the gentlemen from training camps who're born to evening dress.

We do not shine at auction; we've never learned to dance;

Our military training wasn't based on war in France;

We can shoot and ride and handle men, and swim and cook and drill—

And we've left our mark on the tropics from Samar to San Juan Hill.

We've only sweat through jungles where the poisoned arrow flies,

Waist deep in stinking rice fields where the paddy-adder lies;

We've starved and froze and fought and died from Taku to Peking—

Ask the head-hunters of Jolo, where the Regulars have been!

We never saw a gas attack; we're a little weak in French.

And a gentleman from Plattsburg taught us how to dig a trench.

We lack the social graces and our hair is getting gray;

We haven't private incomes to help out the slender pay—

Promote the younger fellow, if you think that that is best;

We'll cover up his worst mistakes and shoulder half the rest—

We have no "friends" in Congress, so we'll do the best we can,

But you'll thank your God—before you're through—for the "Temporary" man.

MANLIUS.

In the Army and Navy Journal.

but if he could get the opportunity of watching a first-class gun shot shooting snipe, he might perhaps take hope. The work of a really expert "gun" is apparently miraculous. He appears to take no aim at all, and the gun appears to go off almost before it reaches the shoulder. Indeed there are plenty of shots who will take ground game successfully from the hip—that is, with-

out raising the weapon to the shoulder at all. It is all a matter of training the muscles to *know*, as it were, when the weapon has been aligned on the mark; and the instantaneous snapshooting with a rifle depends upon the same training of this faculty—a very much higher degree of training, certainly, for the allowable margin of error with a single bullet rifle is much smaller than with a scatter-gun—but still the same in principle.

SNAP-SHOOTING AND ANIMATED TARGETS

(Concluded from page 364)

another, is hit by every bullet fired, and driven backward a fraction of an inch, and in so doing, a push rod attached to the plate is operated to close an electric switch. This switch is connected with, and acts upon, an automatic clutch at the projector which stops the film. A bronze spring attached to the switch immediately pushes the plate on the back stop forward into position.

The projector is a standard commercial machine to which special attachments have been added. The most important of these attachments is the electric clutch which functions in response to the switch upon which the impact of the bullet operates. When the clutch is operated by an electro-magnetic trigger, the film is stopped. After the lapse of a predetermined time—usually from three to 5 seconds—the clutch is closed by a solenoid and the film proceeds.

THE AUTOMATIC RIFLE

(Continued from page 365)

of deficient killing qualities, though it was as heavy and faster than any other bullet in existence. Since then we have reduced calibres 42 per cent, weights 68 per cent, and restored the balance by increasing velocities 190 per cent, while an entire modern small arms cartridge weighs less than the bullet in use twenty years ago.

There is no evidence to show that the destructive capabilities of the slow .45 calibre bullet were greater than those of the high velocity .32 calibre, or that those of the latter are superior to those of the .25 calibre, nor any ground for supposing that any deficiency in this respect would attend a further reduction in calibre; whilst therefore objections to such a reduction on these grounds would be based upon conjecture, absolutely no doubts exist as to the advantages pertaining to lighter, smaller, and higher velocity small arms ammunition.

Another feature calling for consideration is the size and weight of the cartridge shell which has shown no reduction proportionate to that of bullets. The strength required to

withstand internal pressure and the strains involved in functioning the actions of machine guns affords little scope for reduction, though something might be effected by the use of a stronger metal than brass, steel possibly, and by further condensation of rifle powders. At the moment the shell is the heaviest element in the cartridge and should not therefore escape attention.

BOOK NEWS AND REVIEWS

(Concluded from page 365)

the viewpoint of the American soldier. Of all the peoples on earth the average American is undoubtedly the most experienced and the most apt in hand-to-hand fighting. . . . It is but the natural expression of the native American's instinct of fighting with his fists. . . . During the third year of the war, when hand-to-hand combats became the rule rather than the exception, English officers stated that the enemy was at a distinct disadvantage in such a fight. As he has seldom been a patron of manly sports, the average German in a combat is clumsy with the use of his hands. . . . As a result almost every time an Englishman hurled his helmet at him, the enemy was so upset that before he could regain his equilibrium, he was pierced with the bayonet. . . .

"Utilizing the facts embodied in these reports as a suggestion, this volume presents a series of positions and holds for the use of the soldier engaged in hand-to-hand encounter. The object of this method is two-fold: to disable or destroy the opponent, and to defend one's self. . . .

"It should further be emphasized that many of the acts barred in clean wrestling are essential parts of this system, and indeed are the most effective means of doing away with an opponent. For instance the gouging out of a man's eyes or kicking him in the groin would be unheard of in the wrestling game. In this system, these are the acts to which all other things lead. They form the apex, and result, if properly applied in the destruction of the enemy. To this end, every hold and every combination of holds has as its object the bringing of the opponent into such a position as to enable the aggressor to attack the eyes or the groin.

"So painful and so wracking to the nervous system are injuries at these points that the enemy becomes helpless for a sufficient period of time to enable the attacker to destroy him or force his surrender."

With an idea of supplementing the practical training given to the personnel of the United States aviation corps by presenting the theories of aerial combat, Major Hollis LeRoy

Muller, B.S., and holder of the American altitude record, has prepared a volume which has just appeared under the title of "The Manual of Military Aviation." The book is published by the Banta Company.

The book is divided into three parts—The Service of Aviation, Training in Aviation and The Science of Aviation. It is arranged so that it can be used as a text book on flying and air fighting, from American, and not European standpoints.

MORE BINOCULARS WANTED

Franklin D. Roosevelt, Assistant Secretary of the Navy, has sent out a second appeal for binoculars, to be used in the naval service of the United States. The assistant secretary says:

The Navy is still in urgent need of binoculars, spy-glasses and telescopes. The use of the submarine has so changed naval warfare that more "EYES" are needed on every ship, in order that a constant and efficient lookout may be maintained. Sextants and chronometers are also urgently required.

Heretofore, the United States has been obliged to rely almost entirely upon foreign countries for its supply of such articles. These channels of supply are now closed, and as no stock is on hand in this country to meet the present emergency, it has become necessary to appeal to the patriotism of private owners, to furnish "EYES FOR THE NAVY."

Several weeks ago, an appeal was made through the daily press, resulting in the receipt of over 3,000 glasses of various kinds, the great majority of which has proven satisfactory for naval use. *This number, however, is wholly insufficient, and the Navy needs many thousands more.*

May I, therefore, ask your cooperation with the Navy, to impress upon your subscribers, either editorially, pictorially or in display, by announcing, in addition to the above general statement, the following salient features in connection with the Navy's call:

All articles should be securely tagged giving the name and address of the donor, and forwarded by mail or express to the Honorable Franklin D. Roosevelt, Assistant Secretary of the Navy, care of Naval Observatory, Washington, D. C., so that they may be acknowledged by him.

Articles not suitable for naval use will be returned to the sender. Those accepted will be keyed, so that the name and address of the donor, will be permanently recorded at the Navy Department, and every effort will be made to return them, with added historic interest, at the termination of the war. It is, of course, impossible to guarantee them against damage or loss.

As the Government cannot, under the law, accept services or material without making some payment therefor, one dollar will be paid for each article accepted, which sum will constitute the rental price, or, in the event of loss, the purchase price, of such article.

Since the first appeal was made for "eyes for the Navy," many historic binoculars have been sent to Washington, by patriotic owners. Among the number is a pair formerly used by Captain William T. Turner, who commanded the Lusitania when she was sunk by a German submarine. The glasses were presented by Louis Sternberger, of New York.

W. N. G. Clark sent a telescope used

on one of the old packets which ran between New York and Liverpool a generation ago. Rev. Edwin G. Witherrill, commander of a G. A. R. post at Springfield, Mass., sent a pair he carried through the Civil War. A woman who signed herself "a poor little old maid teacher" of Albright, W. Va., made the glasses her only possible contribution to the war.

A pair of glasses taken off the U. S. S. Pawnee when she was captured by a Georgia regiment during the Civil War was sent in by a Confederate woman. One pair of binoculars went through the Franco-Prussian war, one was carried by an English officer through the Crimea, a pair came from Frankfort-on-the-Main, and a telescope from Kenneth MacDonald, a twelve-year-old boy, of Keyser, W. Va.

TO AUTHORIZE BUTTONS FOR "EXEMPTS"

Legislation is pending in Congress to provide some mark of distinction for men who have been drafted and exempted, and for volunteers who have been refused by the fighting forces of the United States.

One of the bills provides in part:

"That the Secretary of War be, and he hereby is, authorized and directed to provide and issue to all men who, under the provisions of an act entitled 'An act to authorize the President to increase temporarily the military establishment of the United States,' approved May 18, 1917, or of any law hereafter enacted, have heretofore been or shall hereafter be, drafted into the military service but subsequently exempted therefrom, or who heretofore or hereafter having volunteered for military service shall have been or shall be rejected for any cause, a distinctive button or badge of such design, size and composition as he shall determine and adopt, and to cause a new button or badge to be issued to such persons without charge therefor whenever during the present emergency the button or badge originally issued shall have been lost, destroyed, or rendered unfit for use without fault upon the part of the person to whom it was issued, and to meet the cost of procuring, providing, and distributing the same out of any appropriations heretofore or hereafter made for expenses incident to or necessary for the registration, selection, or draft of persons available for military service.

"That it shall be unlawful for any person other than the one who has been drafted and exempted or who has volunteered and been rejected, as aforesaid, to wear said button or badge, or other button or badge approximating the design thereof, or for any person by misrepresentation to procure the issuance of either an original or substitute button or badge."

Machine Gun Fire Control

By CAPT. GLENN P. WILHELM, 4th U. S. Infantry

A complete text book fully illustrated, of the use of the mil system in the control of machine gun fire with particular reference to modern trench warfare methods.

For beginners as well as experts. All terms are fully defined and illustrated. Tells how to calculate ranges and elevations from contoured maps for indirect fire. Valuable tables are in the book to be found in no other publication.

Do you know how to elevate and direct your machine gun in order to safely fire over your own troops at an invisible enemy trench over a hill?

Do you know what elevation and direction to use on your machine gun in order that you may fire over your own front line trenches and search with long range fire enemy supply dumps and communications on the reverse slope of a hill?

This book tells you how.

THE MILOMETER OR BALLISTIC COMPUTING SLIDE RULE

Have you a natural dislike for mathematical data required for indirect fire? If so, you need this book which is furnished with a most ingenious fire control slide rule that will mechanically figure ranges, measure angles, determine widths, calculate any sight setting or elevation for direct fire, indirect fire, searching fire, combined sights, overhead fire, barrage fire, night firing, etc., and determine all manner of fire control and map problems. Will do all any mil scale will do and more.

Will do all any fire control computing slide rule will do and more. The milometer is constructed on the usual rectangular slide rule design and is simple in appearance and operation.

EXCLUSIVE FEATURES

Common or Mannheim style of slide rule similar to majority of slide rules.

Mil and trajectory scales are on the same side of rule.

Direct reading scales for angles of departure and angles of fall.

Six inch scale in inches and tenths of inches.

Twelve inch scale in inches and sixteenths inches.

Fifteen centimeter scale in millimeters.

Least reading on mil scale is two mils, by estimation one mil.

Rectangular protractor reading to one degree.

Fourteen formulas for range, mil scale, and indirect fire.

Mechanically converts metric units to English and vice versa, with the conversion indexes on the rule.

Made of heavy white celluloid. Graduations cannot be obliterated by wear or soiling as the face of the rule is protected by transparent celluloid.

Each rule is equipped with a catgut cord conveniently located for use with either the mil scale, the protractor, or as a slope board.

Price \$2.50, includes Slide Rule

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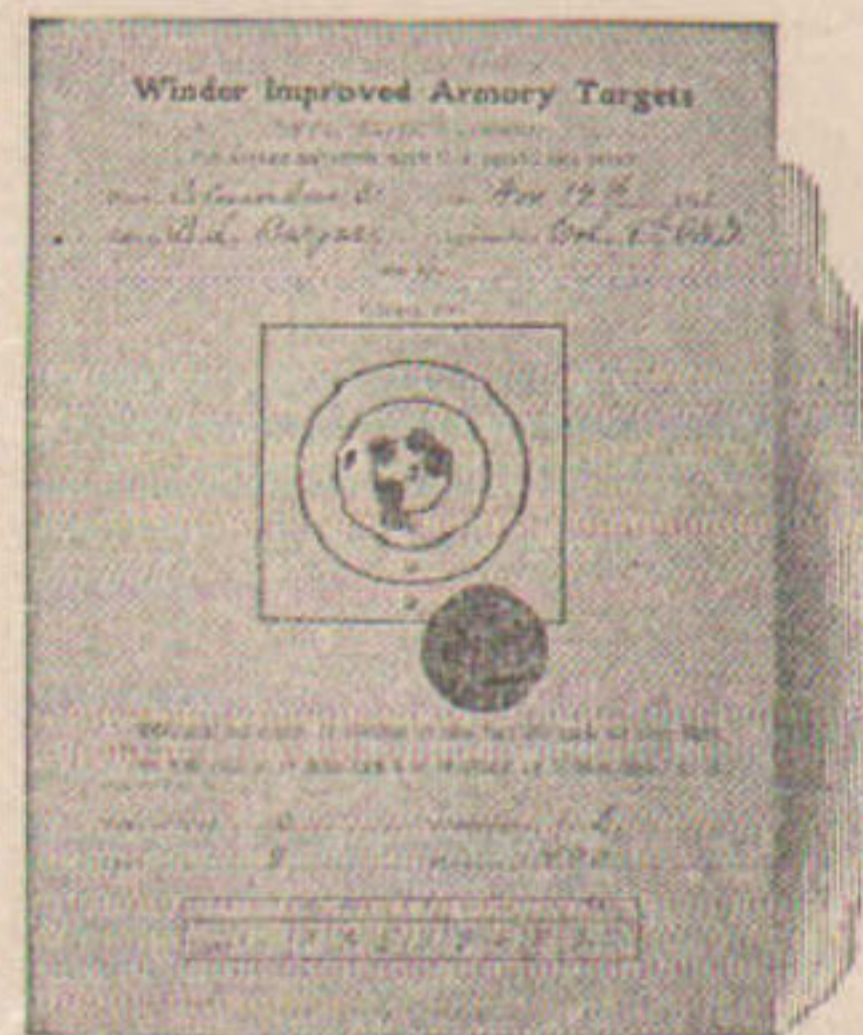


Enables the shooter to practice under conditions accurately approximating those of the open range.

It is possible to vary distances, shooting one string on a target which has been reduced to represent the regulation target at 200 yards, another at 500 yards, and so on through all the ranges.

Individual problems in windage and elevation can be worked out. The same benefits as those resulting from out-of-door shooting in sight setting and elevation, can be obtained by indoor gallery work with the Winder System.

Winder Targets are inexpensive.



Aiming Targets, mid and long range, each .....	.05
Windage and Elevation Charts, each .....	.25
200-yard Targets, slow fire, per hundred .....	.35
300-yard Targets, slow fire, per hundred .....	.40
500-yard Targets, slow fire, per hundred .....	.40
600-yard Targets, slow fire, pin wheel, five targets to sheet, per hundred targets .....	.40
600-yard Targets, slow fire, 5 targets to strip, per hundred .....	.40
800-yard Targets, slow fire, 5 targets to strip, per hundred .....	.40
1000-yard Targets, slow fire, 5 targets to strip, per hundred .....	.40
200-yard Targets, rapid fire, per hundred .....	.35
300-yard Targets, rapid fire, per hundred .....	.35
Wind Allowance Tables, each .....	.05
Spotting Targets, 1/4, 3/4 and 4-inch bullseye, each .....	.05
"X"-Target, "Gallery Practice," per hundred .....	.40

Wind Allowance Tables, each .05
Spotting Targets, 1/4, 3/4 and 4-inch bullseye, each .05

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"DUCK WALKS" IMPORTANT

The three new diseases which have developed during the war—trench feet, trench nephritis (a slow chronic inflammation of the kidneys), and trench fever, which is much like typhoid with malaria intermission, are now believed by medico-military experts to have its origin in the constant rasping and soaking of the skin in the filthy mud of the trenches.

"Duck walks," as the portable footways of the trenches are known, are therefore regarded as one of the most important sanitary developments of the war.

The "duck walk" is an American institution, introduced in Flanders and along the entire Western front by the Canadians. It is nothing more or less than the primitive grating or battened "side-walk" of the lumber camps in the Big Woods, made of two pieces of "two-by-four" scantling, about 16 inches apart, with battens of one inch rough strips nailed across them, an inch or two apart. The walk is usually made in about 8-foot lengths, so that the sections can readily be picked up and carried, to be relaid wherever needed, and for all its simplic-

ity it is a perfect life-saving device. The mud was not only extremely disagreeable and destructive to clothing, to say nothing of reducing the speed of all operations over the surface from 50 to 75 per cent, but it was also extremely unhealthy.

The "duck walk" can be laid almost over-night. It will not sink into the ground, even in the boggiest spots, but half floats, half straddles, itself above the bog. It can be laid upon supports, thrown across the bottoms of the trenches and raised or lowered according to the ebb and flow of the slimy tide of mud. Crushed stone is excellent, if there is plenty of it, but short lengths of it will be buried under the "gobs" of mud deposited on it by hundreds of hurrying feet, and no rain will wash it clean, while the duck-board, by virtue of its porousness and lightness, is almost self-cleansing, and comes up fresh after a shower.

Poilu—Poor old Rene was sure unlucky.

Franz—How?

Poilu—Had his head shot off just after he finished shaving.—*Sun Dial*.

TANKS

Trevor, in Lloyd's Weekly.

"Tank" the British Tommy dubs you;
"Tank" forever is your name;
Ne'er was word so mild and lowly made
to clothe so great a fame!

Monster of the battle-morning, Trojan of
the warrior's brain—
You are Terror to the Teuton; you are van-
quisher again!

Eerie, ugly, fat, ungraceful, hot of breath
and stout of hide,
Stouter is the crew that mans you: brave—
how brave—the hearts inside!

Trampling down the barbs and bastions;
crashing through the boasted lines,
In your roar is Vict'ry's clarion; in your
drabness glory shines!

Where "the thin red line" once conquered,
you triumphant nose your way;
But the same old courage drives you, in a
wallowing line of gray!

Grim Mastodian of the Moderns, stern Sur-
priser of the foe,
Dread Colossus of the trench-lands you
are triumph, you are Woe!

You shall lurch to well-won Freedom, and
the bonded nations' thanks,
Shall, when steel has closed its epoch, crown
the Era of the Tanks!

From Club Room and Firing Line

Los Angeles Team Wins From Army Men

THE Officers' Rifle Team of the Second Battalion, 160th Infantry, stationed at Camp Kearney went down in defeat before a team from the Los Angeles Rifle and Revolver Club on January 20, when the two outfits met on the civilian club's range to try conclusions with the army rifle. The final scores read 1182 points for the soldiers and 1205 for the rifle club.

The Los Angeles boys were not so lucky, however, in the match which they staged a week previously to the army match with the Redlands outfit, and wherein the Redlands riflemen trimmed the Los Angeles boys on a total of 878 against 875. This match is part of a series which is being shot by the two clubs.

But to get back to the military match. When the soldiers from Camp Kearney and the Los Angeles shots got together, the course called for teams of six men, 15 shots per man per range at 300, 500 and 600 yards, military rifles and military sights.

At the end of the 300 yard stage of the struggle the clubmen had a lead of some 11 points. The 500 yard gave the Los Angeles boys 13 points more to draw on in case of bad luck at the 600, but the 600 yard stage, in spite of one bad score for the soldiers, saw them the best men at this particular range by one lone point, still giving the club team 23 points the best of the argument.

The high men for both teams, Ray Jackson and Major Brown, shot respectable scores, the rest of the aggregation on both sides shot less than the high man, so labeling their scores is hardly necessary.

Some of the noteworthy features of the shoot were, first the early rising club men, some of whom got out to the range for an 8:30 match almost as early as 11 o'clock; the neat 500 yard score of Lieutenant Stark, 14 bulls and one four, and the fact that the Soldier team included the four best looking lieutenants in Camp Kearney with not a single damsel on the range to appreciate this galaxy of beauty.

The two teams included a very complete collection of haswassers, old State militiamen of pre-war days; Brown, a veteran of the State shoots of 1911 and on, Crossman, another relic, Ray Jackson, formerly of the Seventh California, Lieutenant Taylor, and Captain Sutherland, all men who have met before in years gone by in hot State rifle shoots.

According to the plans tentatively laid out, a team of rifle club men will visit the Kearny range in a few weeks to shoot a return match with the Soldiers, probably any number firing, and the high six counting as the team.

L. A. R. & R. C.

Name	300	500	600	Tot'l
W. R. Jackson.....	69	71	70	210
A. L. Thomson.....	65	71	70	206
E. C. Crossman.....	70	70	64	204
E. C. Price.....	68	67	65	200
G. L. Wotkyns.....	71	70	58	199
J. W. Siefert.....	63	68	55	186
				1205

Officers' Rifle Team

Major H. H. Brown.....	66	72	71	209
Capt. E. E. Sutherland,..	67	68	62	207
Lieut. A. O. Stark.....	68	74	64	206
Lieut. F. C. Taylor.....	67	67	69	203

Lieut. J. R. Studer.....	66	60	60	186
Lieut. J. Murray.....	61	63	47	171
				1182

The trimming of the Los Angeles crowd by the Redlands team ran over three ranges, 300 and 600 slow and 200 rapid, one minute time, any number of shots to be fired the shooter could get off. The results indicated that in this latter pastime some of the local shots had housemaid's knee of the elbow and others couldn't get a clip into a rifle with a set of burglar's tools. The scores:

Redlands Rifle Club

	Rapid			Tot'l
	fire.	Slow	fire.	
	200	300	600	
Carrithers	69	45	44	158
Sanborn	61	46	43	150
J. Moore.....	56	45	46	147
Crain	61	43	42	146
A. T. Park	54	41	45	140
Witwer	52	42	43	137
Totals				878

Also Presents:

Dague	43	44	49	136
L. Moore	49	42	44	133
Nelson	44	44	44	132
Hodge	40	40	47	127

L. A. Rifle and Revolver Club

	Rapid			Tot'l
	fire.	Slow	fire.	
	200	300	600	
G. L. Wotkyns.....	59	45	48	152
L. Felsenthal	61	46	53	150
A. L. Thompson.....	59	47	44	150
E. C. Price.....	63	47	36	146
D. R. Dickey.....	57	45	40	142
Owen Council.....	49	45	41	135
Totals				875

Haswassers:

E. D. Neff.....	47	44	44	135
Milo Walker	37	42	42	121
E. D. Kemper.....	39	43	34	116

Another "Auto" Fan Speaks

EDITOR, ARMS AND THE MAN:

I have just finished reading another article in the last issue on the .45 Automatic. I have been very much interested in the different articles which have appeared on the gun and will give you my experience with it.

I have been a Peace Officer for several years and at present am the City Marshal of San Jacinto in addition to being secretary of the rifle club. About four years ago I purchased a .45 automatic government model from a sporting goods house in Los Angeles and since that time have carried it very nearly all the time. The fact is I prefer it to any other gun. I have used it under all conditions both on the range and off. I used factory loaded ammunition in it until we formed the rifle club here and since then have used arsenal loaded shells.

There is hardly ever a day that I do not shoot the gun at least a few times and have had to use it quick on one or two occasions and have never known it to jam but once. That was on the range and I had just inserted a full clip and she jammed the first shot. I was using ammunition loaded by the Frankford Arsenal and with a clip which I purchased from the Benicia Arsenal. I do not know what caused it to jam but do know that I have fired an awful lot of ammunition through it and that is the only time that it has happened. I have used

several different revolvers and would not trade my .45 automatic for any of them. For night work where one is likely to have to use his gun quick at short range I think that the .38 S. & W. special would be the best gun as it is double action and a lighter gun but for all around use I prefer the regular army weapon.

With regard to the other models of automatics I have had very little experience but am well acquainted with two other officers who carry Colt's .38 automatics and they both think that there is no gun like them and I have never heard either of them complain of the guns jamming.

It may be that I got an extra good gun. But I take good care of it and keep it clean and in good working order all the time and although I am not an expert shot I know that I do better shooting with the .45 automatic than with any other hand gun.

In regard to the uniforms for rifle club members let us have them by all means. They would be a great thing for the clubs. The Forestry Cloth with leggings and regulation hat would be the best thing I think, as then the eastern clubs could have them made with the blouse and the ones out here could use the O. D. shirt without the blouse.

We have lost a good many members through the draft and those that enlisted but are keeping the club going and will furnish as many more as can and if it comes to where we are needed we will all go.

Yours very truly,

CHAS. Y. ADAMS,

Secretary San Jacinto Rifle Club.

A Way to Help

EDITOR, ARMS AND THE MAN:

In reading this week's issue of ARMS AND THE MAN, I was particularly interested in the address of Major General Richard M. Blatchford, U. S. A., especially where he states explicitly that in order to get our troops properly trained for service in France, they must be thoroughly trained in rifle firing in this country.

In view of the statement, I wish to offer a few suggestions. Would it not be advisable, or better still, possible for the War Department to loan to Civilian Rifle Clubs, affiliated with the N. R. A., two or more 1917 model rifles, and select two or more capable men from each club as rifle demonstrators; to instruct the men who will be selected in the first quota of the draft, the rudiments of rifle firing, and in dismounting and assembling the bolt and magazine, thereby making it easier for the instructors who will take them in hand on their arrival at the respective cantonments.

The Armories in several states could be used for this purpose, as they are now being used by the Civilian Rifle Club for indoor rifle shooting.

The Registration Boards in the different municipalities could notify each man selected in the first and subsequent quotas to report at a designated place to receive instructions.

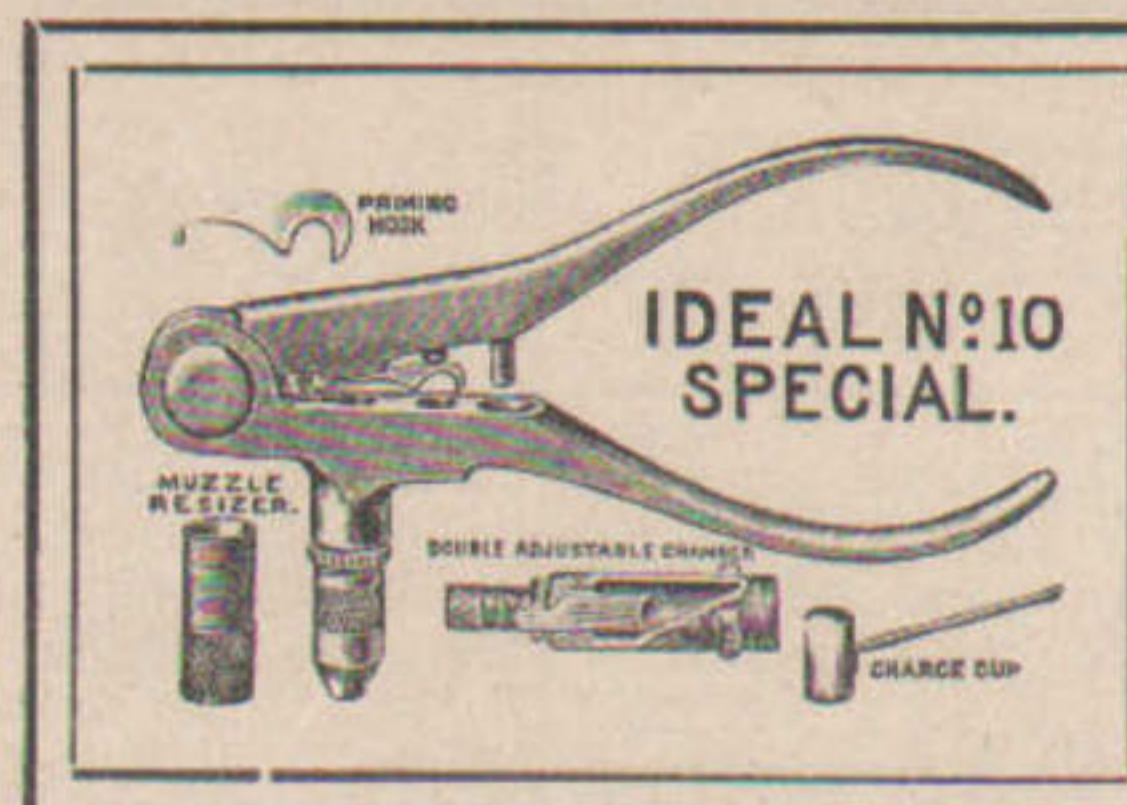
The twenty-two calibre rifles owned by the members of the different Civilian Rifle Clubs could be used to accustom the men in firing ball ammunition without flinching and in the art of squeezing the trigger with the forefinger without any movement of the hand, eye, or arm, which is essential to good rifle shooting.

Hoping you will not think me presumptuous in offering these suggestions, I remain

Respectfully,

EDWIN C. NICHOLS,

Paterson, N. J.



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Chicago League Formed

A league has been formed by six of the rifle clubs in and near Chicago. An organization meeting was held about ten days ago and these clubs are interested in the movement:

Chicago Rifle Club, Ridgeville Rifle Club of Evanston, Commonwealth-Edison Rifle Club, City Hall Engineers' Rifle Club, Englewood Rifle Club and Centennial Rifle Club.

The aim of the league is to popularize rifle shooting and thus aid in preparedness, should its assistance at any time be needed. Invitations have been issued to other clubs to become affiliated with the league and thus assist in making the organization one of influence and power.

The league, later, will hold tournaments in which a number of desirable prizes will be awarded to the best marksmen at each meet.

The officers elected for the ensuing year are as follows: President, F. B. Roziene; vice-president, H. A. Clausen; secretary, G. W. Lunn; treasurer, J. A. Heinrich; range officer, Herman Ordas

At the shoot held previous to the organization of the league, the Chicago Rifle Club won over Ridgeville by the very narrow margin of one point, members of four of the six clubs competing. The results were as follows:

	Slow Rapid Ttl.		
Chicago Rifle Club.....	454	339	793
Ridgeville Rifle Club.....	435	357	792
Commonwealth-Edison Rifle Club.....	424	352	776
City Hall Engineers' Rifle Club.....	372	357	729

Following are the high individual scores:

	Slow Rapid Ttl.		
E. W. Grover, Commonwealth-Edison Rifle Club.....	92	87	179
W. L. Cocroft, Ridgeville Rifle Club.....	90	85	175
E. J. Moberg, Ridgeville Rifle Club.....	94	81	175
O. Mencil, City Hall Engineers' Rifle Club.....	90	83	173
A. C. Guhl, Ridgeville Rifle Club.....	87	83	172
U. Davis, Chicago Rifle Club.....	95	74	169
K. C. Robinson, Chicago Rifle Club.....	94	74	168
W. S. Helmer, Commonwealth-Edison Rifle Club.....	83	77	160
H. F. Walbaum, Chicago Rifle Club.....	92	66	158
H. Shannon, City Hall Engineers' Rifle Club.....	82	70	152

Schoolboy League to Shoot

The schedule for the annual sub-target rifle competition among the high school boys of New York City has been made public. The shooting will begin February 8, and will be directed by the Public Schools Athletic League. There will be two competitions; one for first teams and another for second team.

The schools in Brooklyn and Queens, with the exception of Bryant, will have their own series and the schools in Manhattan, The Bronx and Richmond, with the addition of Bryant, will conduct their own titular event. After these championships are decided the

winner will meet for the city supremacy. The schedules are as follows:

Manhattan-Bronx-Richmond

February 8—Curtis vs. Commerce, Bryant vs. De Witt Clinton, Evander Childs vs. Morris.

February 15—De Witt Clinton vs. Curtis, Morris vs. Stuyvesant, Bryant vs. Evander Childs.

February 21—Commerce vs. Morris, Bryant vs. Curtis, Stuyvesant vs. Evander Childs.

March 1—Bryant vs. Morris, De Witt Clinton vs. Stuyvesant, Commerce vs. Evander Childs.

March 8—Curtis vs. Morris, Stuyvesant vs. Bryant, De Witt Clinton vs. Commerce.

March 15—Stuyvesant vs. Curtis, Commerce

SIGHTING SHOTS AND RICOCHETS

The unofficial scores of the Toledo Rifle and Revolver Club in the first 4 matches of the U. S. R. A. League are:

Match 1

G. D. Carpenter.....	132
P. W. Roberts.....	126
H. Smith.....	120
B. C. Wilson.....	117
F. C. Mooers.....	115
Team total.....	610

Match 2

G. D. Carpenter.....	131
P. W. Roberts.....	121
L. McAfee.....	120
F. C. Mooers.....	116
B. C. Wilson.....	116
Team total.....	604

Match 3

G. D. Carpenter.....	128
F. C. Mooers.....	127
H. G. A. Merk.....	122
L. McAfee.....	121
R. W. Roberts.....	119
Team total.....	627

Match 4

G. D. Carpenter.....	131
L. McAfee.....	126
F. C. Mooers.....	124
B. C. Wilson.....	119
H. Yunkers.....	117
Team total.....	617

The unofficial scores made by the St. Louis Colonial Revolver Club in matches 3 and 4, of the U. S. R. A. League are:

Match No. 3

W. C. Ayer.....	44	38	44	126
C. C. Crossman.....	44	39	42	125
L. M. Fumsey.....	44	39	40	123
E. V. Papin.....	40	42	41	123
E. A. Krondl.....	38	43	41	122

Team total..... 619

vs. Bryant, Evander Childs vs. De Witt Clinton.

March 22—Morris vs. De Witt Clinton, Stuyvesant vs. Commerce, Evander Childs vs. Curtis.

Brooklyn-Queens

February 8—Commercial vs. Boys, Eastern District vs. New Utrecht, Flushing vs. Erasmus Hall.

February 15—Boys vs. New Utrecht, Richmond Hill vs. Commercial, Erasmus Hall vs. Eastern District.

February 21—Eastern District vs. Richmond Hill, Flushing vs. Commercial, New Utrecht vs. Erasmus Hall.

March 1—Boys vs. Richmond Hill, Commercial vs. Eastern District, New Utrecht vs. Flushing.

March 8—Erasmus Hall vs. Boys, Richmond Hill vs. New Utrecht, Eastern District vs. Flushing.

March 15—Flushing vs. Boys, Erasmus Hall vs. Richmond Hill, New Utrecht vs. Commercial.

March 22—Boys vs. Eastern District, Richmond Hill vs. Flushing, Commercial vs. Erasmus Hall.

First Team Schedule—Home team named first.

Second Team Schedule—Home team named last.

Match No. 4

R. A. K. Traber.....	42	41	41	124
M. B. Peterson.....	37	40	44	121
E. A. Krondl.....	38	39	43	120
C. C. Crossman.....	40	41	35	116
T. E. Bunding.....	36	37	37	110
Team total.....	591			

In the Members' Match, shot by the California Railroad Commission Rifle and Pistol Club of San Francisco, fourteen members shooting, William H. Mallett was the winner on a score of 133. Paul Thelen also made a score of 133, but Mr. Mallett was declared winner.

Edmund E. Bado'n has been appointed Range Officer for New Bedford, Mass., Boy Scouts of America. Lieutenant Winchester Britton has received a similar appointment for Cranford, New Jersey.

Three expert, four sharpshooter and one marksman qualifications have been reported by the McKean County, Pennsylvania, Rifle Club, under the National Guard. They are: Experts, O. B. Dunn, 228; F. J. Urban, 221; Carl Johnson, 217. Sharpshooters, E. Edwards, 206; J. T. Brown, 205; N. W. Reed, 203; O. Olson, 191. Marksman, J. Welty, 188.

Charles J. Chamberlain, elected secretary of the University of Chicago Rifle Club, writes that the club has six targets which can be used at 50 or 75 feet, and that the range is in operation for two hours five afternoons a week and four evenings. Rifle practice is required of all students registered in military training, and is offered to all drafted men not claiming exemption, the club being anxious to aid in whatever way possible at the present time.

From Gerald C. F. Beach, secretary of the Lewiston, Montana, Rifle Club, comes this comment:

"The article headed 'Eyes for the Navy' which appeared in a recent issue of ARMS



Mr. I. C. Laughery of Pittsburgh, Pa., uses a great many .22 calibre cartridges. Read what he says about the new



**.22 N. R. A.
CARTRIDGES**

AND THE MAN offered a suggestion. We ran the article in the local papers in with our Rifle news appealing to the public to loan their glasses and offering to handle the shipping. The response was most gratifying. To date we have eleven pairs of glasses, some of them being of exceptionally high quality. Promise of half a dozen additional glasses makes the total of seventeen pairs, and there will be others undoubtedly. We offer the suggestion to every club in the United States."

Mr. Beach also writes that plans are being made to secure and equip an indoor rifle range. "We have an excellent outdoor range location and interest is running high," he says. "An informal dance will be given in March, the proceeds from which we will use in making conditions better on the outdoor range."

The Tucson Rifle Club, of Arizona, is having a service flag made which will contain 75 stars, the number of the members in national military service. The Club is making a specialty of giving free training to all men who have been placed in class 1 of the present draft, as well as a course of skirmish and volley firing to the local home guard, the members of which belong to the rifle club. The club still has enough service ammunition on hand to conduct the season's practice, and expects to qualify a considerable number of new men.

The Pottsville, Pennsylvania, Rifle Club is considering taking steps towards con-

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solidating with the Schuylkill Haven Rifle Club, an organization located four miles away from Pottsville. The reason as given by the Secretary, Hugh Dolan, of the Pottsville Club, is the fact that the enlistment in the service of many members has reduced the club membership. He writes:

"During mobilization of the National Guard on the Border during 1917 the Pottsville Rifle Club lost many of its members, and afterwards through enlistment in the National Army several more, until today we have only six active members, with a consequent lack of interest.

"The Schuylkill Haven Rifle Club has also experienced the same dropping off in membership, and because of the fact that they have a splendid range it is proposed that the remaining members of the Pottsville Club consolidate with them and thereby keep

the shooting game alive until such time as it may be possible to arouse enthusiasm anew.

Word comes from the Rochester, New York Rifle Club, that although the club suffered a loss of interest in the shooting game with the discontinuance of the free issue and purchase privilege, it is still in the running and has a membership of nearly 50. Shooting will be kept up as long as the supply of ammunition on hand lasts.

President Wilson has been presented with the first U. S. Rifle, Model 1917 that was turned out for American forces at the Winchester Repeating Arms Company plant. The rifle is to be preserved as a personal souvenir.

711 Madison Ave.,
Pittsburgh, Pa.,
December 25, 1917.

United States Cartridge Company,
New York, N. Y.

Gentlemen:—Please find enclosed target of ten shots—a perfect score of 100 x 100. This was shot at twenty yards in offhand position by myself this morning using U. S. .22 N. R. A. cartridges.

After using 1,000 of your cartridges, I wish to say they are the best and most uniform of all.

I have used about 12,000 cartridges during the last year. I will use nothing but the .22 N. R. A. in the future.

This target was witnessed by Mr. A. A. Eykas of Aspinwall, Pa.

Respectfully yours,

I. C. LAUGHERY.

(Member of 43rd St., P. R. R. Rifle Team and Ft. Pitt Rifle Club)

Dates Selected for the Grand American Handicap

Trapshooting Classic and the Greatest of all Sporting Events Will Take Place in Chicago August 5 to 9, Inclusive

By PETER P. CARNEY

Editor National Sports Syndicate

THE Nineteenth Grand American Handicap Trapshooting Tournament—the blue ribbon event of trapdom—and the greatest sporting event of the year—will take place over the traps of the South Shore Country Club, Chicago, Ill., beginning on August 5 and concluding on August 9.

The Grand American Handicap Tournament for years as been conducted during the third or fourth week in August and the advancement of the dates to the first week in August will make it necessary for a great number of the State associations to schedule their State championship tournaments earlier.

The 1918 trapshooting classic will be conducted along the same broad lines as previous tournaments, with a number of innovations which should make the coming event the greatest scatter-gun tournament ever staged.

There will be more prizes for the shooters in this tournament than were ever before given. In the past there were 50 prizes no matter how many gunners went to the traps. This time there will be 50 prizes for 350 entrants; 80 prizes for 400 shooters; 90 prizes for 450 gunners, and 100 prizes for 500, or more, contestants. Eighty-five per cent of the purse will be given to the first 50 in the case of 400 entrants; 80 per cent to the first 50 in case of 450 entrants and 75 per cent of the purse to the first 50 high guns in the case of 500 or more entrants.

For the past four years there have been more than 500 participants in the Grand American, in fact, the figures have run over 800 in the last two tournaments held in Chicago. There is every reason to believe that there will be just as many contestants in the tournament this year as last, for the war has greatly stimulated interest in trapshooting. Many clubs have thrown their traps open to the young men of draft age and veterans are giving instruction at many of these clubs so that the future defenders of the nation will be able to shoot—and best of all, shot straight.

Trapshooting is the only sport that has benefited by the world war. Known as the sport alluring for a generation, it has lately been dubbed—and correctly, too—the Patriotic Sport. Every one should know how to shoot, and there is no better way of learning than at the traps.

The Interstate Trapshooting Association will give \$4000 or more in cash and trophies for the tournament and guarantees the winner of the Grand American Handicap event \$500 and a trophy; the second high gun, \$400 and a trophy; the third high gun, \$300 and a trophy; the fourth high gun, \$200 and a trophy; the fifth high gun, \$100 and a trophy. The chances are that the shooter who lands in any one of these places will do better than the guaranteed prize for last year, the winner of which drew down nearly \$800. With the entrance fees of the shooters the total amount of the purses will amount to more than \$15,000.

The events on the program will be the same as last year—opening with the South Shore Introductory at 18 yards on August 5; the National Championships at singles

and doubles targets and the Chicago Overture on the 6th; the Preliminary Handicap on the 7th; the Grand American Handicap on the 8th, and the Consolation Handicap on the 9th. The usual yardage and women's trophies will be awarded in the Grand American. The division of prizes will be the same in the Preliminary and Consolation Handicaps as in the Grand American.

There is a new ruling on the Consolation Handicap as follows:

"Any entrant who participates in a division of the purse in the Preliminary or Grand American Handicaps will not be eligible for the Consolation Handicap."

There will be no joker traps at this year's Grand American, nor will there be any special events for professional shooters. The professionals will shoot down the line with the amateurs in the 18 yard event on the opening day, and the professional with the highest score will be regarded as the Professional Champion of the year. There will be the usual special event for fair Dianas.

Each contestant in the Grand American will wear a number on his sleeve. The number will be of cloth and will be sent to the shooter in advance. A duplicate number will be retained by the committee. Programs will be distributed showing the name and number of each contestant so that it will be an easy matter for the spectators to keep track of the different shooters.

The Interstate Association has asked the Columbus, Ga., Board of Trade to allow the Columbus trophy to be shot for in the Grand American Handicap. This trophy for years, has been shot for in the Southern Handicap. The Southern Handicap has been discontinued, but the Interstate Association does not want the trophy to go out of commission.

Canada Owns Largest Herd

The largest herd of buffalo in the world is now owned by Canada.

They form a picturesque group as they roam over the new national reserve set apart for them near Wainwright, a city that has sprung up 125 miles east of Edmonton, Alberta.

Canadians recognized the need of action if the bison were to be preserved, and before Americans realized it they had purchased the entire herd of 600 from Michael Pablo, of Montana, who had protected them on his ranch near Ravalli.

The history of this herd, now the largest in the world, dates back to 1873, when a Pend o'Reille Indian captured four little bison calves—two bulls and two heifers—by cutting them out of a stampeded herd on the Flathead reservation in Montana.

The Indian in question gave them to the Mission of St. Ignatius, where they were kept as pets and became as domesticated as ordinary cattle. When the heifers were four years old each had a calf. From that time on they gradually increased in number, until, in 1884, there were 13 head, and, finding the care of them too great a tax, the Mission decided to sell them. Ten head were bought for \$250 apiece by Pablo, who was shrewd enough to see that specimens of what was even then

almost an extinct animal would eventually become very valuable.

The herd increased under his supervision, and in a few years it became possible to sell specimens at high prices. Some idea of the average rate of increase may be deduced from the observed fact that half the cows give birth to calves every year, while twin calves are not uncommon. As a rule the bison calf is a very hardy creature.

In 1906, Hon. Frank Oliver, then Canadian Minister of the Interior, obtained for the Dominion Government an option on the 600 head, and they were bought for \$200,000. The "round-up" lasted two months, and was carried out by 75 cowboys, and was accomplished with a loss of less than 1 per cent. Today the herd numbers 2,077.

Although kept within the boundaries of the reserve, the bison can hardly be said to be in confinement. Their stamping ground covers an area of 107,000 acres—165 square miles. It is 25 miles in an air line the longest way across. A wire fence eight feet high and 73 miles long incloses it.

When the fence was completed it was found that 12 wild deer and one elk had been fenced in. Eighteen small lakes and a number of streams are within the park. Prairie chickens, ducks and other game find a resting place here undisturbed by the hunter.

The park is truly a buffalo paradise. The grounds bear every evidence that in other days they have been a favorite haunt of the lords of the plains. Everywhere are outlines of old buffalo trails and wallows.

Aroused by the loss of these buffalo, the United States has established a national bison range in the Flathead Indian reservation in Montana, comprising 12,800 acres, near the towns of Ravalli and Dixon, and it was stocked by the American Bison Society.

WANTS AND FOR SALE

Each subscriber of ARMS AND THE MAN is entitled when his subscription is paid up for one year, to one free insertion of a half-inch want ad in this column.

All he needs to do is to send in the advertisement for insertion at the same time calling attention to the date when his subscription was paid.

WANTED—.45 Caliber Colt Automatic with web belt and holster. Also .38 Colt Automatic pocket pistol. Corp. Bergman, Provisional Company, 71st Infantry, Peekskill, N. Y.

FOR SALE—Government .45 Automatic Pistol, 3 magazines, web belt pocket for 2 extra magazines, like new; price, \$27.00; 100 Special National Match .45 cal. cartridges \$5.00. German Military Mauser 11 mm, fine condition, \$5.00. Winchester single shot 32/40 Target Rifle, heavy 30 in. barrel, wind gauge rear sight, fine condition, \$9.00. 750 Krag and 1,000 Springfield Empty Shells, one cent each. Charles Kessler, 1105 Maple St., Des Moines, Iowa.

FOR SALE—One Springfield Rifle, 1903, with sling, oiler and No. 48 Lyman sight. A1 condition inside and out. Price, to member of the N. R. A., \$35.00 Frank Schorman, Sec'y., Ellensburg Rifle Club, Ellensburg, Washington.

FOR SALE—Used books. Mod. Am. Rifles, \$1.25. Hunting at High Altitudes, \$1.25; Cleveland's Hints to Riflemen, 60 cents; Lewis' American Sportsman, 85 cents; In Europe with Buffalo Bill, 35 cents; Wilcox's Rifle Practice, 1859; Hitting vs. Missing; Rifle and Hound in Ceylon; Gloan's Breechloader; Stewart Edward White's African Campfires and Land of Footprints; Musk Ox, Bison, Sheep and Goat; Field Cover and Trap Shooting, 50 cents each; lists of others. W. S. Ripley, Jr., Wakefield, Mass., 40 Emerson Street.

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Every rifle club secretary or instructor in marksmanship will instantly see in this rifle unlimited possibilities for quick instruction in every department of rifle shooting.

The rifle is accurate to a surprising degree, weighs about six pounds and is fitted with practical target sights—a windgauge globe and aperture front sight and elevating rear peep, with target disc. The rifle is chambered especially for the .22 Long Rifle cartridge.

A sling strap of the latest design permits shooting in any position, either slow or rapid fire.

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Townsen Whelen, First Lieutenant (now Major) says:

I procured an outfit of Hollifield Target Practice Rods for my company. They were used in the indoor preliminary instruction in target practice. One was issued to each squad, and each man fired about ten 10-shot scores each week in each of the positions, i. e., standing, kneeling, sitting and prone, under the supervision of his squad and section leader. This work was kept up for about two months prior to the companies taking up gallery practice. When the company went to gallery practice the results were most excellent. The entire company made the necessary qualifying scores without any trouble at all. The scores averaged around 44 for standing and 49 for the other positions. There were very few three's recorded on the targets, and scarcely any two's. In as much as the practice this year was far and above that of last year, and the only difference between the preliminary practice this year and last was the use of the Hollifield rods, it is my opinion that the results were due to the use of the rods. The men took well to the use of the rods. It became popular, and I was able to continue the indoor instruction with sustained interest longer than would have been possible without their use. I consider the rod very useful indeed in the preliminary training of troops in rifle practice.

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