

ARMS AND  
THE MAN  
RIFLE  
ASSOCIATION  
OF AMERICA

TESTING SPRINGFIELD BULLETS FOR ACCURACY

WINANS BAGS 77 DEER IN 7 HOURS

SOMETHING ABOUT EARLY TELESCOPE SIGHTS

BRITISH SMOKELESS POWDERS

(Conclusion)

WITH THE SMALL-BORE LEAGUE

EDITORIALS and

LATEST NEWS OF RIFLE, REVOLVER AND

SHOTGUN, THE ARMY, THE NAVY AND

THE NATIONAL GUARD

VOL. LXII, NO. 21



AUGUST 18, 1917

# 5 GREAT RIFLE VICTORIES

Were won in the 1917 Indoor Matches, conducted under the auspices of the National Rifle Association, by users of

## Peters .22 Cal. Semi-Smokeless Cartridges

CIVILIAN CLUB COMPETITION -	Championship won by Peters R. & R. Club Team, of King's Mills, Ohio, 9,925 out of a possible 10,000
COLLEGE COMPETITION - - -	Championship won by Michigan Agricultural College Team, 9,638 out of a possible 10,000
HIGH SCHOOL COMPETITION -	Championship won by Iowa City, Iowa, High School Team, 9,517 out of a possible 10,000
HIGHEST INDIVIDUAL RECORD -	Made by T. K. Lee, of Birmingham Athletic Club Team, 1,999 out of a possible 2,000
ASTOR CUP CHAMPIONSHIP - -	Won by Iowa City, Iowa, High School Team, 980 out of a possible 1,000

These decisive wins, with the World's Record of 4,599 out of 4,600 points, made in 1915 and still held by T. K. Lee, clearly indicate that even in the hands of expert marksmen (P) Ammunition will make higher scores than any other kind.

**THE PETERS CARTRIDGE COMPANY, Cincinnati, O.**

BRANCHES—NEW YORK: 60-62 Warren Street

NEW ORLEANS: 321 Magazine Street

SAN FRANCISCO: 585-587 Howard Street

## A Rifleman's Instructor— The Marine Corps Score Book



For use in Army, Navy, Marine Corps, National Guard, Naval Militia, Schools and Civilian Clubs. For beginners, advanced riflemen and rifle teams. For self-instruction and for use in instructing others.

It is the boil-down of the shooting game. Its contents are the digest of range practice and experience. Everything in it is practical, easy to learn and easy to teach. It is the last word in accuracy of the art of shooting, instructing and range service.

Supply it to your Company, Club or Team. It

will save you labor. Your men will then instruct themselves. Your subordinates can teach it. It will produce results for you with the minimum of work.

Adopted by the War Department and issued by the Ordnance Department to organizations of the Army, and to the Organized Militia

Remittance should accompany order. Stamps accepted for orders less than \$1.00. 20% discount on lots of 50 or more, freight paid by purchaser.

Price, 20 Cents, Post Paid

**ARMS AND THE MAN**

WASHINGTON, D. C.



The Official Organ of the National Rifle Association of America

Volume LXII, No. 21

WASHINGTON, D. C., AUGUST 18, 1917

\$3 a year. 10 cents a copy

## Testing Springfield Bullets for Accuracy

By C. S. LANDIS

**T**HEORETICALLY any bullet is two thirds "Bull." Spell it and count the letters.

Practically—no one can tell how much bull is in any bullet until the pit boy throws the board on the shooter—and—I know some people who are willing to swear that all pit boys are liars.

The first time that I discovered that some bullets had considerable more "Kick" to them than others was about 1894 and the story runs something like this:—

About this time a more or less—generally less—innocent, tow-headed kid, meaning me, was ambling along life's pathway guided jointly by a father who did not believe in any kind of shooting—for me at least—and a grandfather who was the best rifle shot in his end of the county and a crackerjack wing shot in addition.

I suppose that I would have fallen from grace eventually anyhow as I spent most of my time with grandfather; but while father was trying to keep me from growing up into a rough neck and a tough and grandfather was trying to keep me from growing up as a ninny, a dude and the physical wreck which I was at that time, I became acquainted, at grandfather's suggestion, with a Methodist minister by the name of Dodd. Now Dodd happened to be a gun crank and made me my first slingshot thereby starting me on the downward path, so that anyone that disagrees with me at any time can blame it on Dodd. Being a minister he should have known better.

Poor father had lost out but he didn't know it for he was very much elated at my sudden and apparently unexplainable friendship for the preacher. So was grandfather but he didn't tell father the reason. Neither did I.

Grandfather did not think that it was safe to allow me to run wild with a real gun at this time so between us we evolved a line of sling shots that were the real thing. Grandfather supplied a bullet mould to cast a round bullet weighing about 150 grains. He also built a furnace of bricks in which I could cast bullets back of his barn where I was supposed to be safe from the enervating influence of father and the women of the two families.

About this time an uncle of mine, who was a storekeeper, died and among other things left a 25-pound bag of buck shot that grandfather appropriated for my especial benefit to the end that I was well heeled for the summer's shooting.

The sling shots were soon getting in their deadly work. By the time the summer was over I had broken the leg of a neighbor's dog that had bitten me, had killed a cat that I hated because it could lick my pet cat, and had inflicted a dose of Kultur on some chickens, about a dozen pigeons, and had broken every window out of a tannery that was about 150 yards away from our back yard.

These were the main things. Of course there was plenty of small fry that went the usual route, but men of my age, at that time, paid no attention to such trifles.

Everything went along very smoothly until one day I very foolishly initiated my kid brother into the wonders of the shooting game and loaned him the second best sling shot and a pocket full of the 150-grain bullets. The youngster sneaked back of the house and was trying to pick a sparrow off the pear tree when I stuck my head around the corner of the house to yell at him and got the bullet above the right ear.

After the excitement had died down and I felt better father confiscated all the artillery in the family so that grandfather and the preacher had to hand out an extra fine brand of lies to get father to lift the embargo on all the ammunition in the gang.

This catastrophe necessitated a new supply of firearms to replace those father had acquired, so the munition makers got to work and fairly outdid themselves in model 1894.

One day father stated that next day we would all drive out to a butchering so I spent the rest of the day casting bullets. A day in the country meant plenty of shooting.

Next day I went along well supplied with ammunition, Dodd, Singer-Landis, sling shot, model 1894, straight pull, and guaranteed to throw a bullet 200 yards if aimed high enough. I was as tickled that morning as Ed. Crossman was the morning he received his first Ross, before the blamed thing had developed any family scandals.

By the time we got to the farmhouse three hogs, that would dress over 300 pounds apiece, were killed, scalded and hung up to cool. Father went into the house and everyone gathered in the parlor to talk about the weather, the crops, politics, religion and the inevitable neighborhood scandals. After some time when I thought that everyone had forgotten about me, I slipped out the back way, fully armed and hunting trouble.

Nothing seemed to turn up to shoot at except about two dozen pigeons asleep on the barn roof, in plain view of the house, and I had learned that there are only certain times where it is advisable for a kid to shoot pigeons and this was apparently not one of those times, so I sat down and watched the hogs.

After a while it occurred to me that the largest hog's snow white, freshly scraped and washed "Southern exposure" made a peach of a mark.

No brand new bull's-eye at 500 yards on a clear sunny morning ever looked more inviting than that clear white "bull." No sooner though than done as I put every ounce of strength in my skinny arms in pulling back those two "nickle gums" and at the sharp swat of the speeding bullet I was startled and then horrified to see a gaping big hole right in the middle of the ham, a regular pinwheel of a bull's-eye, a hole as big as a nickle.

A horrified yell from the house woke me up as I was hurriedly trying to wipe off the traces of the mischief and plug up the hole, so I cleared out for the barn but father

was pretty spry on his feet and brought me back and suggested a few things that would likely happen when we got home, as he paid for the ruined ham and tried to get me out of the scrape.

After things quieted down I sneaked off back of the barn, when suddenly the pigeons became alarmed and flew off the barn and the finest bird in the lot—a big black tumbler—flew against the lightning rod and broke its neck. I ran over to pick it up—I had forgotten about the sling shot in my hand, and I was spotted at once from the house as I picked up the flopping bird. No one could see the lightning rod or the circling birds but they did see me and the struggling bird and old sudden death, model 1894.

Father suggested that we take a walk behind the barn for my health. I never liked to argue with father when he was angry—so I went along.

Now I am not going to say anything about what happened behind the barn but if father could shoot like he could do some other things that I hate to think about he would have had grandfather skinned a mile.

There sure was some "Bull" in those bullets that day.

So much for ancient history and a little foolishness. What most of us are concerned about is how we can make every shot a bull or how we can cut out the wild shots.

Most of us that load at least part of our ammunition for match shooting weigh our powder charges. How many of us weigh our bullets?

Suppose we do a little figuring. Take the Springfield shell for an example. Suppose that we have a good supply of powder out of one lot on hand and use a charge of 50 grains. If we have a good pair of scales we can easily weigh to one fifth grain with speed.

Our error in weight then is two fifths of one per cent. We can just as easily weigh to one tenth of a grain if we take more time to it. Our error then is one fifth of one per cent. Slight variations in the strength of the powder in that lot we cannot guard against in any manner. That is up to the manufacturers.

If the bullets vary one, two, or three per cent in weight, not to mention variations in diameter, shape or hardness of core and jacket, why all this foolish fussing with the powder?

I suppose that I follow the sporting magazines as carefully as most people and considerably more so than the average rifleman.

I am not interested in reports put out by Ordnance officers of arsenals because anyone who has ever been in any kind of a factory knows the difference between sample work and the regular run.

I do not know where I can get a table giving the average and maximum and minimum variations from weight of any large lot of bullets put out by the government or anyone else. Some people occasionally pull a couple of bullets and weigh them but that is very little indication of what the variations will be in the weight of several hundreds or thousands of bullets.

I happened to want some very accurate ammunition for match shooting in a large club to which I belong. In this club the competition is very keen and a half dozen or so of us are so evenly matched that a point or two will nearly always win or lose a match.

This is the method that I used to test the bullets:

I picked out a supply of 150 grain bullets, and had a scientifically inclined friend weigh them on a pair of scales that cost about \$150.00 and pick out several that weighed just 150 grains. He did this and gave me seven that were supposed to be just 150 grains in weight. Then I tested these seven against each other, on my scales which are also very accurate, until I found two that were just even in weight and were midway in weight between the other five.

I then concluded that these two bullets did weigh exactly 150 grains as nearly as it could be ascertained with our equipment. I then marked them and kept them both so that I could check my scales for exact balance if at any time they did not appear to be doing accurate work.

I then picked out ten bullets that appeared to be exceptionally perfect, just as I would pick them out for a match. This is what I found that they weighed.

Two weighed 149½ grains to within ¼ grain.

Two weighed 150 grains to within ¼ grain.

Two weighed 150½ grains to within ¼ grain.

Three weighed 151 grains to within ¼ grain.

One weighed 152 grains to within ¼ grain.

Therefore the variation in these specially selected lot of bullets was not less than 2½ or more than 3 grains or a maximum error of one per cent. If specially selected ones vary one per cent, what in blazes will the common run vary? Why weigh powder charges to within one fifth of one per cent and use bullets that vary one per cent?

I then weighed 200 bullets very carefully and separated them into lots of ½ grain variation. Then every bullet in each lot varied ¼ grain or less from the standard of that lot or the maximum variation in any one lot was ½ grain or less.

The 210 bullets weighed as follows:  
One weighed 152 grains.

Three weighed 151½ grains each.

Twenty-six weighed 151 grains each.

Fifty weighed 150½ grains each.

Sixty weighed 150 grains each.

Fifty-four weighed 149½ grains each.

Eleven weighed 149 grains each.

Two weighed 148½ grains each.

One weighed 148 grains.

The average variation was only ½ grain or an error of about one-third of one per cent, but the trouble was that the maximum variation was 4 grains.

If I am shooting at anything back of 200 yards I do not want any 4 grain variations in the bullets I am using because I can get one grand licking easy enough without any handicap like that. I happen to be one of those lucky guys who will pull that 4 grain variation on the long range every time.

From this it begins to look as if the fellow who weighs his powder charge to one-tenth grain and guesses at the bullets is like the farmer who greases the rear wheels of his wagon but lets the front wheels screech in the altogether.

Therefore I weigh my bullets and keep them in boxes labeled as follows: 148-148½-149-149½-150-150½-151-151½-152, etc., and when I feel like trying to hand some other fellow a trimming I load ammunition that has no scandals in the family that I can eradicate.

Yes, I know that Corporal Jones from Arizona, who has 20-20 eyes and no nerves at all has made so many consecutive bulls at 500 yards that the scorekeeper fell asleep, with ammunition that was not prayed over or had its teeth examined or needed a wet nurse to keep it on the job, but one day he was in a match with Sergeant Tryemout from Kentucky, who was just one bull ahead when all of a sudden that imp of satan in the pit slams up a big red board on number 6 and a little black sticker up at one o'clock—six inches from the edge of the bull, that looks as if a fly had been both lazy and indiscreet, when seen from out at 600.

Now Corporal Jones is willing to swear by the beard of the prophet and the thermometer, the barometer, the hydrometer, his score book and every wind flag on the range that that confounded bullet scored a pinwheel bull. He puts up his dollar, too, and loses out.

How did he know that that cartridge carried 51 grains and the bullet weighed 148? But that little imp in the pit, he laughed; for he got the dollar, and some day possibly he will laugh as he sits down on your dollar and waits on the next sucker to come across.

## Winans Bags 77 Deer in 7 Hours

IMAGINE a thickly populated country so overstocked with game that seventy deer can be downed in one forest during a single day's shooting without materially reducing the herds; where hundreds of pheasants and literally thousands of rabbits can be bagged, and where foxes, wood pigeons and rooks have become so plentiful as to be regarded as menaces to crops and poultry.

To you who have to travel many miles to reach a semi-virgin wilderness wherein to get a shot at widely scattered game, hedged about by laws designed for their protection, such a situation seems unbelievable.

Yet it is nevertheless true, and in England and Scotland these conditions exist at present.

Because of the necessity of preventing the rapid increase of game, drastic steps have been taken by the British government. The systematic thinning out of deer parks and game forests has been undertaken, and well-known rifle shots have been authorized to aid in the work.

Among these men is Walter Winans, and in a recent letter dated in London to *ARMS AND THE MAN* he gives an interesting side light upon the situation in the "right little, tight little island." He says:

"As I am a member both of the N. R. A. and the Revolver Association of the U. S. A., as well as having shot and won for the U. S. rifle team in the Olympic games of 1908 and 1912, the below may be of interest to your readers.

"As you know, there is a shortage of men who can shoot deer in this country, owing to the owners of deer forests being mostly at the front and foresters and deerkeepers being also in the army, and only old, feeble men left in charge of the deer.

"In consequence it is difficult to get deer shot. Farmers are complaining of their ravages and deer forests and deer parks are getting overstocked.

"I have been asked by many owners of deer forests to shoot deer for them. Up to the present I have engagements to shoot over 200 deer this year, and the lists keep rapidly increasing.

"There is a sub-department in the Ministry of Munitions and Food called the Venison Committee, whose members control the shooting of the deer. I have been given a permit to get 300 cartridges of .22 high-power ammunition, of which there is a certain amount still in this country, so I will be able to make a very thorough test of it on the deer.

"I have shot deer with it, but not enough to make sure if it is of big enough calibre for red deer; for fallow deer and roe deer it seems all right.

"Shooting deer in this way, quantities for food and not for sport, makes me feel rather like when Buffalo Bill used to shoot buffalo for the Canadian Pacific Railway.

"It becomes a matter, when you see deer, not of picking out the best head or two (or, if in a well-preserved deer forest, shooting the worst deer, so as to leave the best for improving the herds).

"It becomes a matter of downing as many as you can in the shortest time and making the cleanest shooting possible so as not to waste time following wounded deer.

"A man who merely gets off hits, instead of making each hit a dead sure one, spends the rest of the day following one or two of the wounded and losing the rest of the wounded, so his total for the day is very small.

"My system is to shoot so as to kill clean or to miss clean; a high shot at the brain generally results in a clean kill or a clean miss, but a shot the least low is apt to break a jaw, and then the deer cannot be followed, as he can go as fast as ever. Yet he is sure to die of starvation; so the jaw hit is the one to be avoided at all costs.

"My two best days (from a killing point of view, leaving the sport, of course, out of the question) are one day 44 fallow does and the best day 77 fallow does (this latter during seven hours' work, averaging 11 does an hour).

"My two dressers got all the deer skinned and hung up, dressed, before ten that night.

"They followed with a cart and picked up the deer as they were shot.

"One handicap is that one is not allowed to use hollow-pointed bullets; in fact, such are not allowed to be manufactured. I suppose it is against the rules of war and it is feared that some may get out to the front by mistake.

"Another handicap is that England is so full of houses one must be careful where one shoots, so often a shot has to be abandoned for fear of where the bullet will go in case the deer is missed.

"I will let you know how I get on. I ought to make a record of bag deer, as deer have never been shot in this wholesale way, as the buffalo were, for food.

"When I use up the .22 H.P. ammunition, and I can only get 300 cartridges, I will have to use any rifle ammunition available. I have some old museum specimens of rifles and black-powder cartridges which will have to be used if nothing else is available.

"It is easy to shoot masses of deer in England, but when it comes to the deer in Scotch mountains it will take hard

work and long-range shooting to kill big quantities.

"Yours very truly,

"WALTER WINANS,

*"Member of the Association of American International Riflemen."*

Read in connection with Mr. Winans' letter, stories which have frequently appeared of late in the British sporting journals take on new interest—especially those discussing, either favorably or unfavorably, certain laws promulgated to permit an otherwise unheard-of wholesale slaughter of game in order to protect crops and poultry.

From the pages of these publications one frequently learns of wood-pigeon shoots which bring out entire neighborhoods, armed with all sorts of weapons—mostly of obsolete pattern—and of pheasant shoots where the bags are almost unbelievable.

The pheasant shooting has aroused a widespread controversy in England, since the farmers, urging that they be given permission to clear their grain fields of the birds, take the stand that the pheasant is a menace to their crops. On the other hand, many sportsmen and bird-lovers protest that the pheasant is far more an enemy to the "wire worms" and to various other insect pests than to crops.

By one order the farmers were permitted to kill pheasants during a stated period, which, however, extended into the ordinary "closed season," and which provoked a storm of condemnation.

The "rook danger," as it is spoken of in the British papers, is perhaps very much more real than that from pheasants, since it appears to be the consensus of opinion that rooks cause crop damage which is often attributed to game birds. This comes about, it is thought, because ever since the war rooks have rapidly increased in Great Britain, because the high cost of and the restrictions thrown about ammunition has prevented the customary annual shooting of the rookeries.

In many places in England foxes have been exterminated, and even members of local hunt clubs, who formerly did all possible to preserve the fox, have joined in what is practically a fight for the extermination of this animal along with other vermin.

While to some extent the wholesale killing of pheasants, rabbits, wood pigeons and rooks—especially young rooks—have to some degree augmented the food supply in Great Britain, the shooting of the deer in overstocked forests has become a valuable source of meat for army and navy hospitals, one recent report showing that more than 1,400,000 pounds of venison had been sent from the deer forests of Scotland to hospitals during the past season.

## BRITISH SMOKELESS POWDER

*From Arms and Explosives**(Conclusion)*

IN addition to shot-gun powders, The New Explosive Company, Ltd., has for some time manufactured so-called pure nitrocellulose rifle powders under the name "Neonite." The series distinguishable by differences in granulation includes propellant powders for military small-bores, revolvers and small rifles. The following list specifies the shot-gun types and their composition:—

The New Explosives Co.'s Shot-Gun Powders

NAME. DATE INTRODUCED CLASS	Felicité, 1906. Fib. 42 Bulk.	Red Star, 1906. Fib. 33 Bulk.	N. E., 1912. Fib. 36 Bulk.	Neonite, 1907. Gel. 30 Bulk.
Nitrocellulose				
Insoluble.....	40.5	52.2	50.0	73.0
Soluble.....	20.5	25.5	25.8	9.0
Metallic Nitrates.....	30.0	10.5	12.0	10.5
Nitrohydrocarbon.....	5.0	7.0	7.0	—
Vaseline.....	2.7	3.0	3.5	5.9
Moisture.....	1.3	1.8	1.7	1.6

The "E.C." Powder Co., Ltd.—This company was formed to work the patent of Walter F. Reid and D. Johnson, No. 619 (1882). This patent resulted from work done at the Stowmarket works of the Explosives Company, Ltd., as it was then called, and the product formed thereunder is now known as E.C. No. 1, to distinguish it from later preparations. These are based upon D. Johnson's patent, No. 8951 (1885), E.C. No. 2 and E.C. No. 3 being the commercial names of the powders so produced. The Johnson patent proposed the use of a volatile solution of camphor to harden the fibrous granules, whereas by the former process mixtures of ether-alcohol were utilized for the same purpose.

Reid and Johnson usually had the credit for having been the first to harden dry granules of nitrocellulose by acting on them with a volatile medium which has a solvent action on the nitrocellulose. Upon drying, the granules so treated become hard. This company was undoubtedly the pioneer of the hardening process in the sense that hardening became a general practice following the date of the Reid and Johnson patent, but the exclusive rights thereby granted did not appear to stand in the way of those who followed the excellent example set. The principles governing the Reid and Johnson process had been disclosed in print at a much earlier date, more particularly Abel's patent of 1865. Griffith's patent, No. 3,294 (1877), disclosed the idea of coating granules of Schultze with collodion, whilst the Volkmann Powder Company, which possessed the Austrian rights of Schultze, actually in 1872 treated the grains of sawdust powder with ether-alcohol. The following is a list of this firm's products, present and past:—

The "E.C." Powder Company's Powders

NAME. DATE OF INTRODUCTION CLASS.	E.C. No. 1. 1882. Fib. 42 Bulk.	E.C. No. 2 1890. Fib. 42 Bulk.	E.C. No. 3. 1897. Fib. 53 Bulk.
Nitrocellulose:			
Insoluble.....	30.0	15.9	44.0
Soluble.....	28.2	41.0	30.4
Metallic Nitrates.....	37.8	38.3	14.0
Resin.....	2.1	2.0	—
Vaseline.....	—	—	6.0
Camphor.....	—	1.0	4.0
Moisture.....	1.9	1.8	1.6

Though no patent was, or could have been, taken out for varying the charge from the former British standard of 42 grains—American E.C. and Schultze powders already observing 36 grains and a British powder 38—the "E.C." Powder Company, in the person of Mr. W. D. Borland, earned pioneer honors in the sense of at once creating a new fashion. The change in weight of the propellant charge produced a material reduction of recoil, and also of the hard particles liberated from the muzzle and liable to be blown back into the shooter's eye. This style of powder also favored the use of lighter shot charges, and so facilitated the constant move towards lighter guns. These changes were necessitated by the increasing number of cartridges fired in a day to cope with the ever-growing supply of game.

The Smokeless Powder Co., Ltd.—This company was formed in the year 1887 to work certain improved processes which Col. E. Schultze had developed in Germany as a result of his experience with sawdust powder. Colonel Schultze entertained strong preferences for nitrocellulose made from wood pulp. For gunpowders he regarded this base as greatly preferable to similar nitrocellulose made from cotton. There is actually a material difference between the two products when one and the same acid nitrating bath is used, all the other conditions being meantime carefully standardized. The Smokeless Powder Company, in parallel with the Schultze Company, used these so-called nitro-lignins. Incidentally it gained the unique distinction of getting its powder into the Home Office authorized list under the designation "Smokeless Powder." The company commenced operations with a full program, which included shot-gun, rifle, pistol, and blasting powders. These were marketed on a system of initial letters, thus, smokeless shot-gun (S. S.); smokeless rifle (S. R.); and smokeless blasting (S. B.).

Hitherto, smokeless powder had been considered to be only appropriate for satisfying the relatively simple requirements of the shot-gun. In adapting the accustomed composition for use in rifles the ballistic and physical conditions presented by the rifle had to be considered. Experiments had, therefore, to be made to determine what modifications were necessary to accord with the various degrees of confinement exhibited by rifle

ammunition, these being roughly governed by the class to which each specimen of cartridge belonged. Thus commenced, in this country at any rate, the first effort to reduce rifle ballistics to the system of classification which is such common knowledge to-day. The rules which were progressively built up constituted a new science. The principles governing the classification of powders according to the resistance to be overcome, only found a suitable medium for their expression when the colloidal powder Rifleite was introduced. Since this was a true surface-burning powder, it could be and was made in a variety of granulations suited for revolvers, rifles and shot-guns respectively. A thickness of leaflet appropriate for the .303 rifle was in due course submitted to the War Office committee, which eventually adopted Cordite.

S.R. was seriously considered by various governments as an alternative propellant to black powder for the then existing large-bore rifles of calibre analogous to that of our own .450 Martini. The Spanish Government in particular recorded in the *Memorial de Artilleria*, 1890, the results of their trials with S.R. powder. Here was a smokeless rifle powder which was being fired by squads of soldiers in the regular weapon of the day. In the same sense the fact must be recorded that the firm of Kynoch loaded in this important year, 1890, one million rounds of .450 Martini-Henry cartridges with S.R. powder for the Indian Government. Two years later the Smokeless Powder Company issued a table of loads for nearly one hundred different calibres and patterns of rifle, revolver and so forth. The list included military small- and large-bore rifles, sporting expresses, American repeaters—in fact, the weapons dealt with formed as comprehensive a list as the total stated would suggest. From a historical point of view the stage of development attained at this period is of extreme importance, because the adoption of Cordite in the same year 1890 deprived such efforts of the commercial reward that would have followed naturally. To other countries was transferred the task of developing nitrocellulose powders to the position they occupy to-day.

Pioneer honors must undoubtedly be accorded to the Smokeless Powder Company for having been the first to realize in practical commercial form the colloidal smokeless nitrocellulose powders as they are so widely used to-day. The use of powders of this type will be extended in a surprising number of directions as a result of war experience. The Smokeless Powder Company's claim must be restricted to type of powder, for the "E.C." Company and others before 1887 had worked hard at rifle powders, though they did not reach the stage of catering for trade requirements.

*(Continued on page 410)*

# Something About Early Telescope Sights

By SIDNEY PORTER

WHEN one considers that 25 rifles, telescopically sighted, were ready for shipment to Sebastopol at the time peace ended the Crimean War, and that rifle telescopes developed in Great Britain during the five years which followed were thoroughly tested out in both Confederate and Federal forces, it seems strange that apparently so little attention is being paid today to the telescope as an adjunct to the service rifle.

It is true that the United States government adopted a prismatic telescope sight and that several manufacturers in the United States at present produce scientifically accurate instruments of this and other types. Yet the fact remains that while the old muzzle loading musket has given place successively to half a dozen types of improved rifles, culminating in the high-powered, flat trajectory Springfield, the same policy of improvement seems to have been absent in the development of sights—both telescopic and iron. The telescopic sights of private manufacture seem now to be used principally by those civilian shots who prefer them to the iron sight in competitions where sights containing glass are permitted.

Whether officials of the United States Army will endeavor to equip regiments of snipers with telescopically-sighted rifles, or whether when the problem of equipment shall finally have been settled, expert opinion will be against the need for telescope sights in trench warfare, cannot be at present discussed with any authority.

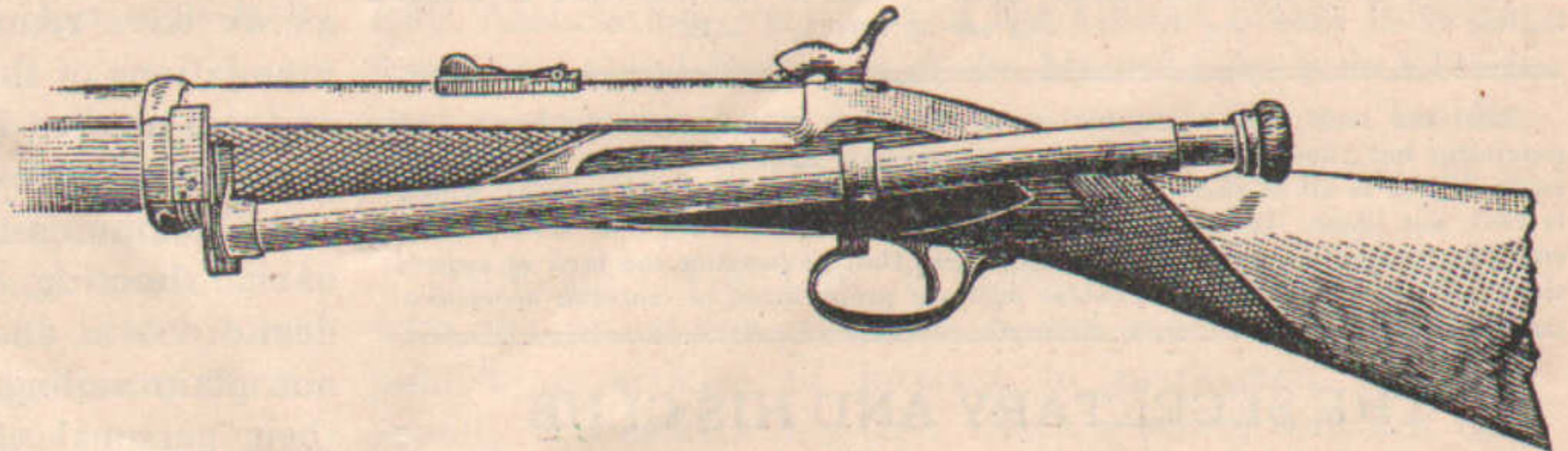
It is possible, however, that the men who have deemed windage unnecessary on rifles for use in the trenches, on the ground that the shooting is generally at short range, may come to a similar conclusion in regard to telescopic sights, although sniping is still done from protected points of vantage usually far in the rear of the front line trenches. Most of the interest seems also to have been centered upon the production of periscope sights to the practical exclusion of even telescopic features.

Whether the present conflict will develop something entirely new in glass sighting equipment, or whether this question will be dismissed to make room for something which in a time of stress seems more important, remains to be seen. At any rate the matter of telescopic sights versus iron sights is still of interest to civilian riflemen. Wherefore something of the history of telescopic sights may not be amiss.

While there is little doubt but what earlier attempts were made to equip rifles with telescopic sights, one of the



The two types of Whitworth-Davidson Rifle. Top, pattern A with rigid 'scope; bottom, pattern B with quadrant.



first practical results seems to have been obtained by Col. C. B. Davidson, of the British forces during the Crimean War. The difficulties attending night firing were directly responsible for Colonel Davidson's scope. These glasses, however, were not given a tryout as peace intervened.

The matter of fitting telescopes to ordnance was, however, occupying the attention of many officers at the time, and several years later they were urged not only for field artillery but for machine guns, including the Gardner and the Maxim. General Gordon, who lost his life at Khartoum, was one of the first officers to see their value in this connection, and in his diary, under date of December 4, 1884, wrote: "With a good mitrailleuse in the hands of a sharp operator, using telescope sights, no enemy gun could be served at a less distance than 2,000 yards."

Between the time that Davidson perfected his first 'scope and the time when General Gordon openly advocated their use on machine guns much transpired in the development of these sights.

Shortly after the outbreak of the War Between the States, 100 Whitworth rifles, of about .45 calibre, fitted with adjustable Davidson 'scopes successfully eluded the blockade and were distributed among picked riflemen of the Confederate Army. Records show that, as incredible as it may seem, these 'scopes frequently enabled snipers to pick off individual officers and mounts at distances greatly in excess of 1,000 yards. Concerning the use of the telescope sight by the Confederate riflemen there is considerable testimony. Arthur Walker, of the 72d Highlanders, in his book, "The Rifle; Its Theory and Practice," published in 1865, told of a telescope sight used in the Confederate

Army which had "cross wires and which could be used with extreme effect."

In an article published two decades after the war under the signature, "A Confederate Soldier," this appears:

"During our Civil war, which ended 20 years ago, there were imported a number of Whitworth rifles, calibre .44 or .45, I believe. I have heard there were only 100 guns in the Confederate service. Five guns were assigned to each division. I was one of the 5 men selected from Gen. B. F. Cheatham's Division of Leonidas Pack's Corp (afterwards Hardie's Corps) in the Middle Department or Army of Tennessee. I was present in all the battles fought in that department from Shiloh to Bentonville (except the last, which closed the war without us), and was one of the 5 men left of our whole company at the surrender.

"The history of the effectiveness of those guns in the service has never been written, and I have been called upon to write for publication the history of those guns, their effectiveness, length of barrel, calibre, grains of powder (85 I believe), grains of lead, length of telescope, range, etc., in battle and when the armies were at rest. If I remember correctly they were branded on the locks, Whitworth Manufacturing Co., Manchester, England. The telescopic sight was adjusted to the sight of the gun, the nipple (tube for cap) was platina lined; the cartridges we had were made by Messrs. Ely Bros., of London; the powder, Curtis' and Harvey's powder and ball being encased in a paper shell.

"We on one occasion, raised our telescopes 2200 yards elevation, then  
(Continued on page 410)

# ARMS AND THE MAN

1110 WOODWARD BUILDING, WASHINGTON, D. C.

EVERY SATURDAY

Editor

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

Associate Editor

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 SECRETARY AND HIS CLUB

LET us consider the case of the rifle club secretary. You all know him. He is the officer who holds a thankless job. He is the man upon whom in the past, you have called to unravel all sorts of requisition tangles, determine the titles of rifles, report qualifications, follow up delayed shipments, and to perform the thousand and one other duties demanded by his office. And, to a greater or less extent, according to his abilities or his limitations, he is the man who is largely responsible for the success or the failure of the club, for no rifle club is stronger than its secretary.

In the days before the War Department, in order to conserve all small-arms for use in emergency, suspended the free issue of arms and ammunition to rifle clubs, the secretarial duties although at times endless and bothersome and thankless, did not perhaps demanded of the incumbent more than an ability to handle the routine business of the club.

That, however, has changed. The free issue—for the time at least—is no more. A score of members in every club are wondering in what direction they can turn their activities. Some of the old timers, who love rifle shooting for the joy of the game, will jog along, reloading when they cannot get arsenal shells, and keep up practice, no matter what happens. Yet in every club there are perhaps twice as many new-comers who are just being brought under the spell and fascination of the sport. These men and boys have been led to expect the free issue. They depend upon it. Just now, they are lost without it. Yet they have been enlisted in the ranks of rifle shooters. They are valuable timber. They should not be permitted to drop out of sight. The game needs them and they need the game.

But how can they be kept interested? They can no longer shoot 120 rounds of ammunition at government expense and purchase more at reasonable prices, when the free issue is expended, except among a few fortunate clubs, where a reserve supply of ammunition is on hand. No longer can new members be enlisted in the work, their enthusiasm heartened by the privilege of obtaining title to that which is most desired by all dyed-in-the-wool marks-

men—a government rifle, when they have qualified as sharpshooter or expert. This is the job which is up to the club secretaries.

There isn't much use in refusing to recognize facts. There are harder days than ever coming, so far as keeping the club range full of enthusiastic shooters is concerned. There have perhaps already been growls from disgruntled ones, disappointed at the failure of the free issue to materialize this year. There will come perhaps many more such complaints, and most of them are going to be directed at the defenseless heads of club secretaries.

All this is to be expected. But it is well to remember, as we have remarked before, that the men who laid the foundations of the rifle shooting game in the United States enjoyed no free issue. They built ranges without government help. They obtained rifles through their own efforts, and the ammunition which they burned to the early glory of rifle shooting, they paid for themselves. There is a great deal of credit due to the "old timers." All with them was not plain sailing, yet they kept the game alive through their personal efforts until the government realized the benefits which would accrue from such a policy and originated the free issue.

It has been easy enough for rifle clubs to flourish during the past three years under conditions which the earlier rifle clubs never enjoyed. Therefore it is well for every rifle club member who has benefited from the free issue to realize that he is just so much ammunition better off than he would have been if there had been no allotment, and that it should be his personal ambition to do just as much for the shooting game as the club members of the past have done.

To bring every civilian rifleman to this point of view is going to be a hard job for some club secretaries and an easier one for others, according to the amount of enthusiasm among the members.

Fortunately, the National Rifle Association may be relied upon to do all in its power to boost the game. Already the strong likelihood of the adoption of a qualification course for small-bore marksmen paves the way for rifle club activities independent of the free issue or the cost of service ammunition.

Naturally there will be a good many riflemen who will not take kindly to the small-bore work. They will miss the recoil of the gun, the sharp, friendly crack of high-powered cartridge, the keen pleasure of knowing that a steel-jacketed bullet, traveling at a rate of 2700 feet a second, has been unleashed by a gentle squeeze, and sent straight to a distant target over the long, sunlit range. And yet while every rifleman will sympathize with the fellow who feels this way about it, it is time to remember that the suspension of the free issue was not predicated upon a whim but upon a real national need, and that much can, and no doubt will be, done with a small-bore rifle, to say nothing of the possibilities and the undeniable fascination of reloading.

Wherefore there is much missionary work to be done; and it is a safe bet right now that the club whose secretary has the good of the organization at heart, and who is capable of devising ways and means of fostering enthusiasm, is going to be among those organizations whose activities



will not cease and whose membership lists will not die of inanition during the next year or two.

The game is not lost by a long shot. There are unquestionably a score of ways in which any club can be held together. The problem is not so much what to do, as how to get all clubs to adopt some sane and practical shooting program, interesting enough to bring the boys to the firing line, and inexpensive enough so that every club member can afford to indulge in his usual practice.

Among the rifle clubs of the country are secretaries splendidly equipped to carry on even the strenuous work which the situation seems to demand. There are other secretaries willing enough to do the work, but who lack either knowledge or experience.

Men of this sort should get together, for the good of the game.

Have you, Mr. Secretary, any plan for keeping the club together? Has it been approved by practical trial? Has your club originated any unique competitions, which have met with enthusiastic receptions? Or have you any ideas, as yet untried, but which appear to be of value?

If so, and if you wish to see the civilian rifle clubs of the United States emerge from the period which is now upon them, stronger and more firmly established than ever, write to ARMS AND THE MAN, and tell us about them. We'll

put them in a "Secretaries' Column" and pass them along where they will do the most good; for we want help, and, in the last analysis, it's going to be up to the Club Secretary to keep the rifles popping on the old home range.

**"WILD LIFE"**

THE official organ of the Missouri Fish and Game League has appeared under the title "Wild Life," and ARMS AND THE MAN extends to it a cordial greeting.

The publication will, if indications count for anything, hold considerable interest for riflemen, at least in the middle west, for C. C. Crossman, vice president of the National Rifle Association, President of the United States Revolver Association, and President of the Mound City Rifle Club is its business manager, as well as a contributor. He has already included in the magazine a story which will be of interest to the rifle shots of his State.

Although "Wild Life" is primarily a magazine dealing with the protection of game, it can make no mistake in publishing articles of interest to marksmen, who are usually enthusiastic hunters. Such a policy will not only bring results in the propaganda which every fish and game league sponsors, but will also do great good in interesting hunters in rifle range practice.

We hope that "Wild Life" has come to stay.

**A QUICK-FIRING CANNON FOR SKIRMISHERS**

In order to combat the German machine guns the French of late have introduced in their army a new quick-firing cannon of such construction that it can be readily carried forward by attacking infantry. Thus the skirmishers are able to put enemy machine guns out of action by well-directed shots from their 37-millimeter cannon, which they can carry along with them.

The French "37" is a befitting companion to the famous "75," which has figured so prominently in the French campaigns to date. The smaller weapon has every feature of its larger brother, including quick-acting breech mechanism, accurate sights and automatic recoil. Lying out on open ground the crew of two men can fire up to 35 high-explosive shells per minute. The shells measure almost 1½ inch in diameter, and the gun has a range well above a mile for accurate shooting. This odd little field piece can be readily taken apart and carried by six or eight men, and is available for use in advanced positions as well as in the open. It is a most workmanlike piece of armament for use under the conditions prevailing on the Western front.—*Scientific American*.

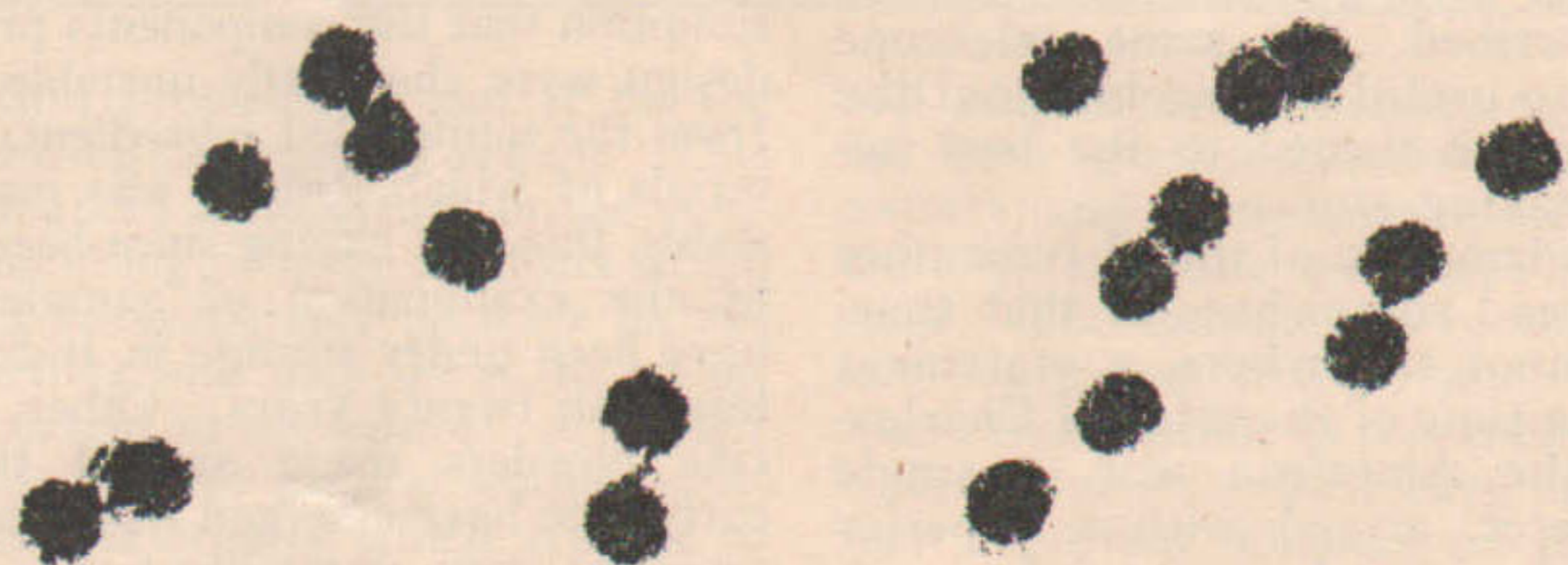
**ASKS ADDITIONAL MACHINERY FOR RIFLES**

An additional appropriation of \$9,500,000 will be required by the

**Pistol Possibilities\***

SUPPLEMENTING the article by E. Newitt, on "Testing for Precision and Rifle Rests," we are producing two excellent groups made by Mr. Newitt.

These groups are of exceptional interest, inasmuch as they not only illustrate the possibilities of the six-point rest, but also those of a good target pistol and ammunition when the human element is eliminated.



These groups, actual size, show two strings of ten shots each, fired from a Stevens-Gould Model pistol, UMC .22-calibre Lesmok ammunition, held in a six-point rest, at 50 yards.

Mr. Newitt declares that these groups are the best he has ever seen at such a distance and show how far the pistol marksman has yet to go before he realizes the full possibilities of the hand-gun.

Ordnance Department to supply machinery for the manufacture of rifles according to an estimate sent to Congress by the Secretary of War.

The Secretary states that the imperative necessity for the submission of this estimate arises from the fact that there is no other way than by the procurement and use of this machinery

by which the forces it is contemplated to raise in connection with the European war can be armed at proper time.

This item was not included in the regular estimates for 1918 for the reason that at the time they were submitted the war was not in progress, and the necessity for this additional appropriation was not apparent.

## EARLY TELESCOPE SIGHTS

(Continued from page 407)

aimed at the top of a tall pine timber at least 100 feet high, perhaps 120, which stood at the rear edge of a large cotton plantation dropping our shots amongst a large park of wagons, and in a short time cleared the field of every wagon. This was the longest range practice we ever had; how far it was we never knew, but supposed it to be two and a half or three miles. "Now these guns did some big work, and they were the pets of the army, and the readers of today will wonder how so much could be accomplished by so small a gun."

In Colonel Davidson's original paper on the subject, in Vol. VIII., page 426, of "The Journal of the United Service Institution" he added this statement:

"When we want to survey some distant object with more than ordinary exactness we have recourse to the telescope. . . Military riflemen, too, when at long ranges, avail themselves of its aid. Of this we had a striking example which occurred in the rifle pits before Sebastopol. One soldier was observed lying with his rifle carefully pointed at the distant embrasure, and with his finger on the trigger, ready to pull, while by his side lay another with a telescope directed at the same object. He with the telescope was anxiously watching the moment when a gunner should show himself, in order that he might give the signal to the other to fire.

"Now it is an established fact, to which I can speak from thirty years practical experience, that by a simple mechanical arrangement, such as has been described, the same telescope which is so useful in searching out the object can be turned to the best account in taking aim.

"In confirmation of this, I remember to have read somewhere at that time, but I cannot say where, a statement that at the time of the siege of Charleston, in the American war, a single sharpshooter, armed with a superior rifle, fitted with telescopic sights, was able to silence a gun. As soon as ever a gunner appeared at the embrasure he was picked off."

According to facts published at the time, two patterns of the Whitworth-Davidson telescopic rifles were furnished in the order for 100 such weapons placed by the Confederate government.

In pattern A, the telescope was rigidly fixed to the rifle. Changes of elevation were accomplished by shifting the cross-hairs in the telescope by means of two screws set near the middle of the scope.

In pattern B changes of elevation were made by means of a quadrant, fitted with a vernier scale.

(Concluded on page 412)

## BRITISH SMOKELESS POWDER

(Continued from page 406)

Smokeless Powder Company's Shot-Gun and Rifle Powders

NAME. DATE INTRODUCED CLASS.	S. S. 1889. Fib. 38 Bulle.	S. R. 1890. Fibrous Rifle.	Shot Gun Rifleite 1894. Gel. 37 densr.	Rifleite 303 1890. Colloidal Rifle.
<i>Nitrocellulose:</i>				
Insoluble.....	53.0	45.2	76.0	1.7
Soluble.....	13.0	25.5	18.9	82.5
Metallic Nitrates.....	18.0	18.5	—	—
Nitrohydrocarbon.....	10.0	—	3.5	14.8
Vaseline.....	4.6	—	—	—
Starch.....	—	8.0	—	—
Moisture.....	1.4	2.8	1.6	1.0

On the lines of S.S. and S.R. this company issued granulations for small rifles and revolvers (S.K. and S.V.). These were later replaced by granulations of Rifleite for all small arms bores, viz., Rifleite .450, Rifleite .250, and Revolver Rifleite. The Rifleites were nitrocellulose preparations gelatinized by acetone. The earlier issues of Rifleite .303 gave trouble in hot climates because at that date manufacturers of colloidal powders had not learnt the art of removing the volatile solvent to so advanced a degree that the escape under storage of any that might remain did not matter. Since residual solvent is a taming agent the powder which contained a proportion liable to escape would become violent under storage. With solvent completely removed for all practical purposes, taming agents of a permanent character would be introduced until the desired activity of combustion had been imparted. All colloidal powders in these early days were prone to this defect, and progress was delayed by the common assumption that the components present by design were chemically unstable. Apart from the unintended ingredient, the materials of which Rifleite was made were stable, this fact having since been proved by the examination of samples which have been under storage in India for no less than twenty years. Other colloidal rifle powders made around the same early date have emerged less successfully from the same durability test.

*Nobel's Explosives Co., Ltd.*—This company originated as the British Dynamite Company of Glasgow, Alfred Nobel transferring to it in the year 1871 his patent rights for Great Britain and her Colonies. The manufacture of smokeless powder was not begun until after the invention of Ballistite by Nobel patent, No. 1471 (1888). A shot-gun form of ballistite was produced at Ardeer according to the special processes described by Lundholm and Sayers in patent No. 10,376 (1889). It was first issued to the trade in 1895. For a long time Sporting Ballistite was the only shot-gun powder made by this company, but in the year 1902 they issued a 33-grain fibrous powder under the name Empire. The company also manufactures Ideal pow-

der, also a 33-grain fibrous powder, and N.S., which is a 42-grain fibrous powder.

Nobel's Shot-Gun Powders

NAME. DATE OF INTRODUCTION. CLASS.	Ballistite. 1895. Gelatinized 25 grain dense.	Empire. 1902. Fibrous 33 grain Bulk.
<i>Nitrolycerine</i> .....	37.6	—
<i>Nitrocellulose:</i>		
Insoluble.....	—	48.0
Soluble.....	62.4	34.0
Metallic Nitrates.....	—	9.0
Vaseline.....	—	7.0
Moisture.....	—	2.0

*The War and Sporting Smokeless Powder Syn., Ltd.*—This syndicate was formed for the purpose of exploiting Cannonite smokeless powder, which was made in two compositions with appropriate granulations for sporting guns and military rifles respectively. In the year 1894 the powders were commercially obtainable, and demonstrations of their capabilities were frequently made at the works which had been set up at Trimley, Suffolk. In the same year the good-will of the business was acquired by John Hall & Son, Ltd., this firm later on becoming a constituent of the Curtis's & Harvey amalgamation in 1898. The separate factory was in due course closed, the operations being transferred to Tonbridge. Cannonite rifle powder earned great distinction at Bisley in the early days of the use of the small-bore rifle for the long-range competitions, the Mannlicher 6.5 mm. rifle being almost exclusively used. When the manufacture of Cannonite was discontinued, owing to certain dangers associated with the method of granulation adopted, the few remaining pounds of powder were carefully guarded by the owners as a valuable bull's-eye mixture. Cannonite shot-gun powder was originally issued as a fine-grain powder, the standard charge being about 35 grains. A coarse-grain edition issued in 1897 was a 42-grain bulk powder. Further changes were made some years later, and it emerged as Smokeless Diamond.

Cannonite Smokeless and Shot-Gun Powders

NAME. DATE OF INTRODUCTION. CLASS.	Cannonite Shot Gun. 1894. Gelatinized 42 dense.	Cannonite Rifle. 1894. Colloidal Rifle.
<i>Nitrocellulose:</i>		
Insoluble.....	74.0	55.1
Soluble.....	7.7	31.8
Metallic Nitrates.....	7.5	2.5
Resins.....	2.0	8.8
Charcoal.....	8.0	0.8
Moisture.....	0.8	1.0

*Messrs. Curtis's & Harvey.*—This firm introduced its first smokeless powder under the name Amberite, in 1893. The black-powder manufacturers were rather late in taking up the manufacture of smokeless powder, the early difficulties with "nitros" causing them to underestimate the possibilities of the new propellants. Their large trade in blasting powder and in brown prismatic for big guns, coupled with an ever-increasing

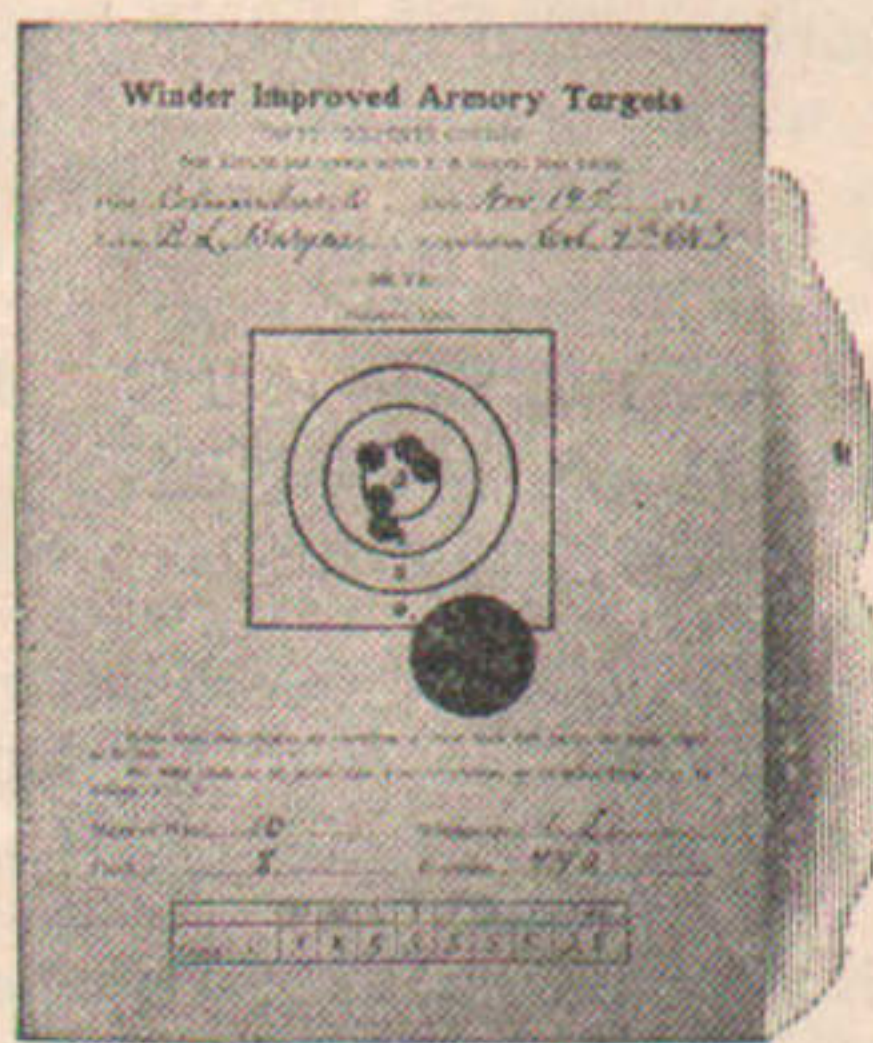
# THE Winder System OF GALLERY TARGETS

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 Clock and Flag .....	3.75
"X"-Target, "Gallery Practice," per hundred .....	.40

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

Order through ARMS AND THE MAN  
1110 Woodward Building, Washington, D. C.

## DISCOUNTS TO N. R. A. CLUBS

The government has recently found it necessary to discontinue the practice of supplying ammunition to N. R. A. clubs.

However, thru your club secretary, you can buy



in case lots, at special N. R. A. discounts. Send order to most convenient of the following points:

National Lead Company, Boston, Buffalo, Cleveland, Chicago, St. Louis or Cincinnati; John T. Lewis & Bros. Company, Philadelphia or Baltimore; National Lead & Oil Company, Pittsburgh; United Lead Company, New York; Selby Smelting & Lead Company, San Francisco.

Prompt shipments, particularly on .22 short and .22 long rifle cartridges, can be secured from local warehouses at points mentioned.

**United States Cartridge Company**  
2201 Trinity Building NEW YORK

export of black powder for sporting use, made them under-estimate the attack on their home preserves, and they accordingly withheld for a long time the testimonial to their rivals which the introduction of a smokeless powder would necessarily represent. By 1893 all doubt on the subject had vanished, and the black-powder companies made haste to repair their earlier omission. This company also manufactured a 33-grain fibrous powder, "Crystal."

Curtis's and Harvey's Smokeless Shot-Gun Powders

NAME. DATE OF INTRODUCTION CLASS.	Amberite 1893. Fib. 42 Bulk	Ruby. 1899. Fib. 42 Bulk	Smokeless Diamond 1903. Gel. 33 Bulk
Nitrocellulose:			
Insoluble.....	18.6	46.6	69.0
Soluble.....	46.0	4.0	6.6
Metallic Nitrates.....	28.0	34.0	15.0
Vaseline.....	6.0	—	2.5
Charcoal.....	—	—	5.6
Nitrohydrocarbon.....	—	8.2	—
Starch.....	—	5.5	—
Moisture.....	1.4	1.7	1.3

Kynoch, Ld.—This well-known cartridge company announced, on the occasion of a visit of gunmakers to their works early in the year 1898, that they had completed a smokeless sporting

powder and proposed to put it on the market during the ensuing season. This powder marked a departure in the commercial handling of these products which has reacted considerably on their technical properties and may do so to an increasing extent in the future. A powder which is issued for general loading must possess characteristics which are not so necessary when powder and cartridge are sold in made-up form as a complete entity. The proprietary cartridge came to stay. Powders loaded into such cases are not dominated as others are by the necessity to adhere to the conventional specification. So long as the cartridge satisfies the approved ballistic test it is immaterial to the user whether the powder has been adapted to the conditions of loading or *vice versa*. Peculiarities in a powder which might possess advantages, technical or commercial, would be ruled out if they required special consideration in the loading, or a peculiar form of cartridge case, but such peculiarities would be no deterrent to the use of powders possessing them by a company which only issued the product in loaded form. On the Continent this mu-

tual adaptation of cartridge components has been carried further than in this country, and the technical issues involved must be carefully examined at a later stage. The introduction of the proprietary cartridge makes similar mutual adaptation possible in this country. Gunmaker interests, which have exercised a very important influence on the specification of smokeless powders, are safeguarded in the case of the proprietary brands by the modern commercial system of price maintenance. The chairman of Kynoch's initiated the new vogue, and he recommended it to the favor of gunmakers as a remedy for the destructive competition which had grown up amongst themselves and for which they had failed to find a remedy by mutual arrangement.

Kynoch's Smokeless Shot-Gun Powders

NAME. DATE OF SAMPLE CLASS.	Kynoch's Smokeless 1901. Fib. 42 Bulk	K. S. 1913. Fib. 42 Bul	K. S.C. 1912. Fib. 33 Bulk
Nitrocellulose:			
Insoluble.....	49.5	40.4	41.5
Soluble.....	5.5	27.0	36.5
Metallic Nitrates.....	25.0	28.0	12.0
Nitrohydrocarbon.....	19.0	—	5.0
Vaseline.....	—	3.0	3.0
Moisture.....	1.0	1.6	2.0

*Henrite Explosives, Ltd.*—This company was formed by Lorenzo Henry to work the patents of Luck and Cross, Nos. 5,286 and 18,233 (1898). The processes disclosed in these patents were novel, so far as regards bulk sporting nitros, in that the granules of fibrous nitrocellulose were added to a large volume of aqueous solution of acetone for the purpose of acting on the nitrocellulose and providing for its subsequent hardening. A sample of this powder examined in the year 1902 gave the following analytical figures:—

Fibrous 33 Bulk	}	Nitrocellulose: Insoluble	71.0
		Soluble	7.1
		Metallic Nitrates	7.5
		Nitrohydrocarbon	7.6
		Paraffin	5.5
		Moisture	1.3

The above brief survey of smokeless powder developments clearly indicates, in the first place, that sporting powders have been vigorously developed in this country on pioneer lines, and, secondly, that rifle developments were checked by the adoption of Cordite in the year 1890. The names of Abel and Dewar stand on record as the inventors, or, more correctly, patentees, of the same under patent No. 11,664 (1889). Cordite composition stands as follows:—

	Original Cordite	MD (or Modified) Cordite, 1902
Nitroglycerine	58.0	30.0
Insoluble nitrocellulose	33.3	58.5
Soluble "	3.7	6.5
Vaseline	5.0	5.0

Just as the Government used Cordite for all possible purposes, so the trade thereafter adopted it to the exclusion of more suitable products similar to those made abroad. Now, when the heat of the Cordite controversy has subsided, calm judgment guided by experience pronounces verdict to the effect that for many cartridges Cordite, both of the old and improved compositions, is but a poor substitute for its equivalent manufactured abroad.

There have been exceptions to the rule of using Cordite for everything, but they have lacked the success which accompanies manufacture on a large scale. The Smokeless Powder Company, as recounted at length, associated its fortunes with nitrocellulose powder and went under. At different times such companies as Nobel's, Curtis's & Harvey, Kynoch, and, later, the New Explosives Company, have made pure nitrocellulose powders, but these were not "stabilized" in the modern sense and were less successful than similar products made abroad.

As manufacturers of Cordite under Government contract, a large number of concerns have earned the title to rank as smokeless rifle-powder manufacturers. One of these in particular requires special mention. The Cotton Powder Co., Ltd., was formed in 1872 to manufacture Punshon's patent controllable guncotton: Patent, No. 2,867 (1870). Owing to the

extremely hygroscopic nature of the finished product this explosive proved a failure and had to be abandoned. Punshon's controllable guncotton is nevertheless interesting because it represents a very early attempt to solve the problem of smokeless powder. The following extract from the *Standard* of April 22, 1872, is of great historical interest:

"Mr. Punshon has shown how the force generated by guncotton could be rendered serviceable for small arms or ordnance. . . . Mr. Punshon conceived the felicitous and scientific idea of coating the minute particles of guncotton with films of sugar. . . . The first public trial of Mr. Punshon's guncotton was made at the National Rifle Association meeting in July, 1870, when two or three shots were fired by Lord Elcho in the presence of Lord Cloncurry, Colonel Colville, and many others. . . . In July last year . . . was the first instance of guncotton charges being permitted in prize contests, and it will be interesting to give the score made by Mr. Punshon in the Bass Competition on that occasion, namely, at 200 yards, 5 bull's-eyes, 9 centers and 2 outers."

We might add that Lord Cloncurry's name appeared in the Bisley prize list for the meeting held in 1913, and further that this, though the first, was not the last occasion of services rendered by the National Rifle Association in the demonstration and testing of smokeless powders. The long-range match rifle contests have been pre-eminent in this respect.

**EARLY TELESCOPE SIGHTS**

(Concluded from page 410)

The Federals, no less than the Confederates, made considerable use of telescope rifles, having had several patterns. The Berdan rifle, the Sharps, and the muzzle-loading Enfield all appeared equipped with 'scopes among Yankee sharpshooters. Colonel Berdan's Sharpshooters, among whom was California Joe, have become famous in Civil War history.

Twenty years after the close of the War Between the States, considerable interest was apparent among civilian shots on the subject of telescopically sighted rifles. But where one now hears of Winchester, Stevens and a few other modern makes of 'scopes, the "glass sights" of that time, manufactured principally in Syracuse and Philadelphia, were the Malcolm, Mogg and Pierce 'scopes. The Malcom telescope was made in one of the first telescope factories established in the United States. It came in lengths of from 12 to 40 inches. The tubes were of solid cast steel, drilled, and the lenses were either pure white glass or pebble. These 'scopes were fitted with achromatic objectives, screw

movement elevation and windgauge adjustment.

"Iron Ramrod," who contributed extensively to the sporting papers of his time, wrote in 1889 that he had obtained a telescopic sight and mounted it upon a No. 3 Remington-Hepburn 38-50, carrying a 255 grain bullet. With this equipment he claimed that he could easily spot a bullet hole in white paper at 40 rods, and could get a good definition on a small bull's-eye on white paper at 250 yards.

**PAPER BULLETS**

When used for short-distance firing, bullets of paper are found to do much more damage than those of metal. Recent experiments prove that a paper bullet, passing through six pieces of tin one foot apart, buckled them completely, whereas a metal bullet merely left a small hole.

**FRENCH OFFICERS TO INSTRUCT IN MODERN ORDNANCE**

Five French artillery officers have arrived in the United States to conduct a course of instruction at the Fort Sill School of Fire. They came at the request of this Government to teach officers of the National Army the methods followed by France in serving heavy modern ordnance, with special reference to forms of "barrage."

The officers are Major Reille and Captains Durette, Trives, Pierret and Monroe. No limit has been placed on the time they will remain at the School of Fire. The arrival of these officers and the announcement of their mission seems to lend color to the statement that United States artillery in France will probably be equipped with the famous French "Seventy-fives."

"Who are our rear guard?" asked the commanding general as the retreat was assuming the proportions of a rout.

"Those who have the worst horses, sir," replied the aid, without the slightest hesitation.—*The Lamb.*

Tommy Atkins had taken a German officer prisoner and demanded the latter's sword. The officer shook his head. "I have no sword to give up," he said; "but won't my vitriol spray, my flame projector or my gas cylinder do as well?"—*Boston Transcript.*

First Mosquito Fleet Seaman—What's that wriggling object off there near the horizon?

Second Ditto—Guess it must be a nervous wreck.—*Widow.*

# Off Hand From the Clubs

## "Old Timers" Active In Many Rifle Clubs

BEFORE very long, the chances are, activities of many rifle clubs will devolve upon the youngsters less than twenty-one years old, backed up by men beyond conscriptionable age. And in addition here and there among the civilian organizations there are many men, who cannot properly come under either of these classifications, but who can be counted on to "do their bit" in keeping the rifle game alive. They are the "old timers,"—not necessarily "old timers" in the familiar use of the term which has come to denote those who have been in the match shooting game for twenty or thirty years, but "old timers" because during all their long lives they have loved the sport of shooting, principally hunting, and in their age have turned to the rifle clubs as a gathering place of kindred spirits.

In almost every rifle club there is some old chap who has gravitated naturally to the performance of those duties which most of the younger men are too busy to undertake, whether they be the thankless job of club secretary or the manifold duties of the *major domo*. That such men have won the confidence and respect of the club members goes without saying.

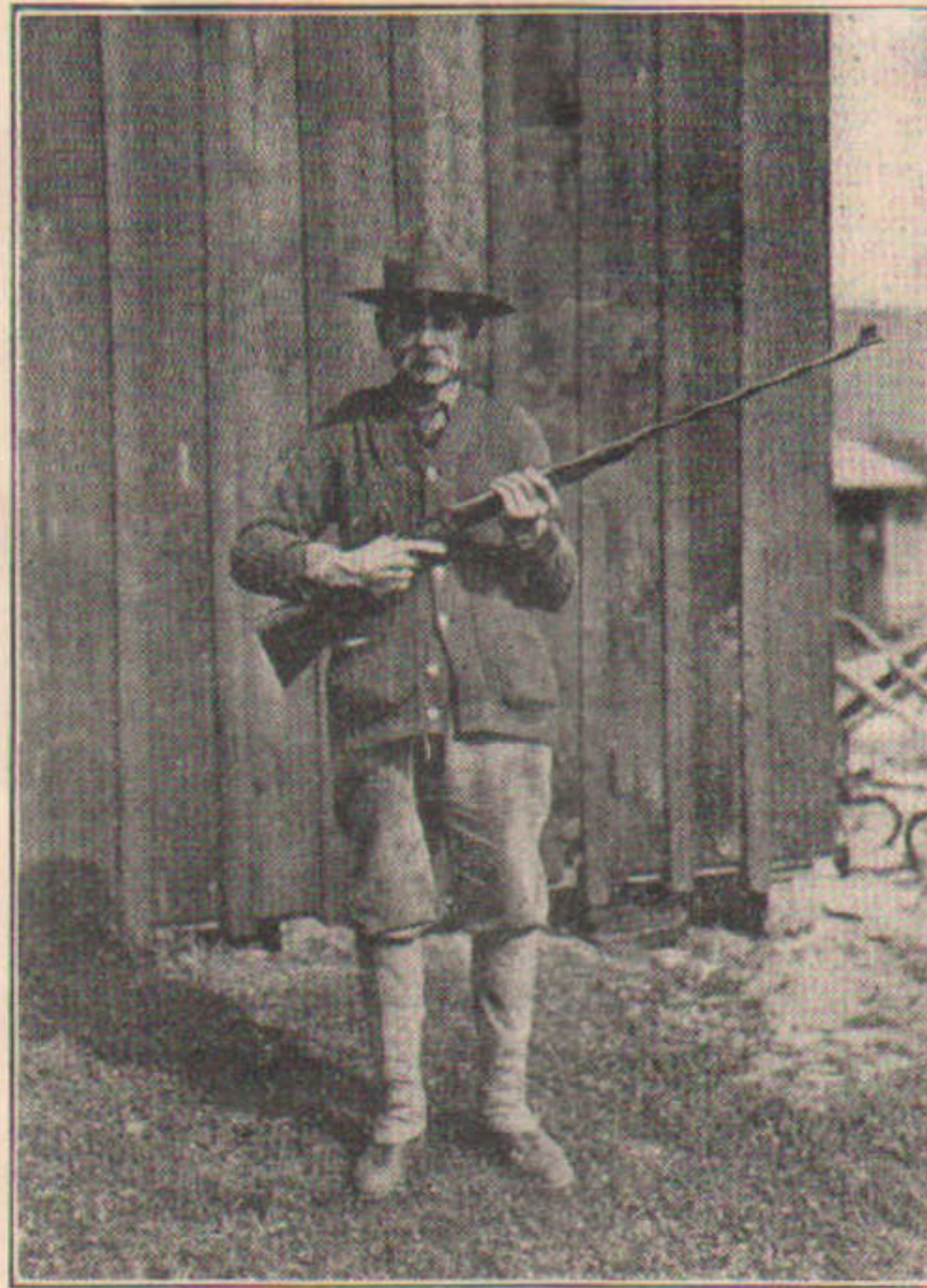
When the question of these "old-young men" of the rifle clubs comes up, there are several names which immediately come to mind—George J. Roskruge of Arizona, Sergeant Harry Miles of the Los Angeles outfit, Charles L. Hyde of Pierre, South Dakota, "Young Sergeant" Carl Armendinger of the Grand Rapids, Michigan, Rifle Club, and a host of others, in the lives of each of whom there are many chapters which would be of interest to the rifleman of today could the full stories be dug out and printed.

Almost everybody interested in civilian rifle shooting in the southwest either knows or has heard of George J. Roskruge, of Tucson, Arizona, and General O. C. Guessez, of San Antonio, Texas. Each of these men has labored for many years in the cause of civilian rifle work and each is still active.

A brief biography of "Sergeant Harry" Miles of the Los Angeles Club, from Ed Crossman, is interesting reading. Here it is:

"Sergeant Harry C. Miles, 77 years young, veteran of Civil and Spanish-American wars, oldest man in age and oldest man in point of service in the California National Guard. Not born with silver spoon in his mouth, but did have a trusty Parker in his right hand—then or very shortly afterward. Has served nearly thirty years in the guard without a break. He went through the Civil War in an Illinois regiment and fought in the great battles of the Army of the West. Saw divers flocks of ducks near Nashville, so remained in that neighborhood after his discharge from the army, until he'd killed off all the said ducks and nothing was left but to work.

"Came to California in the late 70's, bought a bee ranch, found after he'd bought it that in dry years one had to feed the little bees instead of being fed by them. Whereupon came four dry years, much grief in bee business, and Miles shot for the market from the ducks that then swarmed



Harry Miles of the Los Angeles Club

in California lagoons, which explained why at the age of 76 when overhead clay bird shooting was popular in the club, he used to trim the best of the trap sharks.

"Put in the Spanish War with the Seventh Cavalry, hoping his little hope with the rest of the hopes of the regiment that they'd be ordered to the Philippines or anywhere but the Presidio of San Francisco.

"One of the half dozen best offhand shots in California with the old military rifle in the days when offhand was the popular game, he ground through many a hard-fought battle for the stand-up and shootem honors.

"With Judge John York, Sergeant G. T. Kellogg, and P. S. Hansen, instigated and abetted by one Crossman, the old gentleman organized the Los Angeles Rifle & Revolver Club in 1908, recruited chiefly from the ranks of Co. A, Seventh Cavalry. In eight years history of the club, he never missed a shoot unless it rained cats and dogs and there was no shoot or else they had the handcuffs on him down to the 'milish' for a parade or something of the sort. Gradually weaned himself of adherence to militia so far as shooting was concerned and put in every Sunday at the club.

"Appointed himself coffee-maker in extraordinary to the club six years ago, and in all the years since has never missed building the fire, getting out the pot and the coffee and the cups and the spoons and the sugar and making coffee and calling in the crew, and watching them drink the coffee, then washing up afterward. Sometimes he gets paid for the raw materials used, more often he tells the treasurer to credit it on his dues. N. B.—His dues are paid up to one year before Gabriel blows his ox horn.

"Able to qualify as Expert at any time with score of 220 or better, has proved this time and again. Every once in a while he suspends his hustling around in the effort to help some other chap, drags out Betsey, sits down at 300, his favorite range, with his face in rear of formidable black cigar,

and proceeds to knock out 43 or 44 or 45 on the A target. Then he grins, gets up, washes out Betsey's tummy with nitro-solvent and goes to helping somebody or working around the range, satisfied and willing to call it a day's sport.

"His favorite sport, a passion with him, is shotgun shooting, preferably at quail or ducks, but with clay birds a close third. When the Damascus barrels of the old Parker ejector swing after an overhead clay bird, trying to emulate the flight of a canvas back, a bird that drives to profanity or tears half the shotgun men tackling the game, that bird is just the same as ruined.

"He doesn't drink, and he's just plain-spoken enough not to like those who do—if they do it in his sight. He does smoke—black husky cigars—and he does it as if he liked it, not as if he were merely a half unwilling slave of the weed.

"He's a rather small chap of the wiry type, able to walk with the best of men half his age and less, willing to work all the time and so having it on any of them. Quail don't escape by merely flying a couple of hundred yards—nor a mile if the old gentleman were certain of where they alighted.

"Nobody thinks of Harry being old—he isn't old save in number of years that have passed over his happy head. He's not as old as most men half his age, either in mind, spirit, or energy. In short he's wonderful, and an inspiration to the men who fear the years over 50 lest they feel their age.

"He never preaches, but the lesson of his life is not hard to read—perpetual cheerfulness, and the constant pleasure in doing something for the other fellow, forgetful and inappreciative as the other fellow is only too often.

"The fates may give some of us money and others fame but they have no gift in their sack half so valuable as the virile, wiry body and the happy contented mind, and the keen delight in sportsmanship of Sergeant Miles at the age of 77. Ten years constant association with a man on the rifle range and off, in the hunting field and in the armory, tells the tale. I have told only the half—and not necessarily only the best half at that."

"Sergeant Carl" Armendinger bears about the same relation to the Grand Rapids, Michigan, Rifle Club that Harry Miles does to the Los Angeles Club. Indian fighter, marksman, soldier and lover of nature, he has passed his sixtieth birthday, but is still an enthusiastic upholder of rifle practice. He has been honored with the presidency of the Grand Rapids Club, and at last reports was engaged in recruiting duty for the U.S. Army. On his last birthday his itinerary, as outlined in the Grand Rapids Press was about as follows:

"Bright and early he had his outfit packed. He had been up before sunrise digging worms and grubs and getting things ready for the biggest day of the year. The first stop was at the rifle range. Each year since the opening of the rifle club in 1910 he has qualified as an expert rifleman. The sergeant was delayed at the range by one thing and another so that he didn't shoot the entire 250 points, but instead he shot 200 from the various positions.

"All he really wanted to do was convince himself that he could leave his old gun in the case all winter without touching it, then on his sixtieth birthday go out onto the range and without any trouble drop hot shots into the bull's eye from all angles.

"He did it, too. Out of a possible 200 points his card totaled 193 points, whereas he really needed only 150 points to qualify.

"Strange to say the sergeant's eyesight seems to be a trifle poorer than in years gone by. He can barely see the sights on his gun even with his glasses on. But once he gets the extra eyes off and squints down one barrel its all off; doesn't matter apparently where he seems to point or how much or how little time he takes—just about as sure as he pulls the trigger the white signal comes up announcing another bull's-eye.

"After convincing himself that he was as handy with an army rifle now as in the old days, Sergeant Armendinger packed his rifle away and asked to be taken to Bear creek, north of Plainfield on the Cannonsburg road. Several boxes of flies, three boxes of worms and grubs, plenty to eat, the old corn cob which probably was with him when he first joined the army; plenty of tobacco, an old campaign hat, rubber boots and a handsome rod constituted his outfit.

"Once on the stream, in Indian fashion, he sought a secluded spot among some rocks where he cached his grub stake. The water was running a little high and he was sure the trout would scramble for the fly. Pulling up the hip boots he dropped into the stream, to remain the rest of the day."

Charles L. Hyde, of Pierre, S. D., who is younger than either of the Sergeants, but who is active in the civilian rifleman game of his State, began his education as a marksman while a cowboy when the West was still raw. Of the differences between the rifle game today and when he first knew it, he says:

"What a wonderful thing the modern rifle of today is when put beside the old gun of 40 years ago.

"In 1879 I lived on a large cattle ranch in Colorado. The only gun we had on the ranch (not counting the revolvers which most every man carried) was an old smooth bore muzzle loading rifle. This gun was about 6 feet long and shot just a round lead ball, of about 40 caliber, shoved down its mouth, on top of a little black powder and rag. This gun could not execute as far as our best pistols of today, but was genuinely accurate up to something over 100 yards.

"In those days there was a bounty of 25 cents on chicken hawks and I won quite a reputation in getting them with this old rifle, shooting more than 40 of them in one year, two or three of which were flying when hit. I love that old gun yet; how I wish I had it.

"Today we like our little 303 Savage for a sporting rifle, as wolves and the big Canadian geese are about the biggest game we now secure in central South Dakota. I am certain I have secured more than 20 of these grey honkers, while on the wing, with this rifle, during the past 10 years, though now the Government says we must no longer shoot them with the rifle.

"With my two younger boys, one 12 and the other 15, the latter shooting an old Army Springfield, we captured 19 big jack rabbits one Saturday this fall.

All three of my boys love the rifle and the outdoors just as much as I have, and to me life would at times seem very incomplete, without the rifle and the hills."

#### Suggests Course for Automatic

Burt Freeman, of Phoenix, Ariz., a member of the N. R. A., suggests the following course for the .45 automatic, in connection with the proposed hand-gun work of the National Rifle Association:

7 Shots rapid fire, 15 seconds, 15 yards, Target L.

7 Shots rapid fire, 15 seconds, 25 yards, Target L.

7 Shots, timed fire, 30 seconds, 50 yards, Target L.

7 Shots, slow fire, 7 minutes, 75 yards, Target L.

He adds: "The dope for the above course was mostly taken from the account of the pistol match at Jacksonville in 1915."

#### INQUIRIES OF GENERAL INTEREST

In this column will appear excerpts from requests for information and for official interpretations, made to the National Rifle Association, the replies to which may be of a generally informative nature.

Q. Is it permissible for a club to purchase from the government the free issue ammunition which the club has on hand? Our understanding is that the club is charged with the free issue, and that the charge may be cancelled only by expending it in official shoots, purchasing it outright, or returning it to the Ordnance Department.

A. While there would be no objection to the club purchasing the ammunition outright, unless the suspension of purchase privilege would operate in this instance, there is no particular reason for such expense as the ammunition was issued to the club and can be used by its members.

Q. I want to learn how to do some trick shooting. Can you tell me some stunts that are fairly easy to learn? I have seen some professional shots perform but their stunts are too much for me. I intend to use a .22 caliber repeating rifle.

A. I don't wonder that you found imitating the professionals a hard task. They have spent years practicing the stunts they do. You will undoubtedly want to learn how to hit things thrown in the air. The best way to do this is to start on large tomato cans. Have them thrown straight up at close range so that they will offer a very large target. When you can hit the can four or five out of six times, try an object a little smaller and so on until you can hit marbles or other pieces of about the same size. Always shoot just as the target begins to descend.

Q. What are the most suitable sights for trick shooting?

A. You will find a large bead front sight and a flat bar rear sight with a U-shaped notch very satisfactory.

Q. Which is the most suitable for a small boy, a single shot rifle or a repeater?

A. For the very small boy the extra light weight single shot rifle is best, but he should be graduated to the repeater as soon as he is old enough to handle one, for the modern rifle is the repeater and it is well for the boy to learn the principles that govern their use and care at as early an age as possible.

Q. How much should a good repeating .22 caliber rifle cost these days?

A. Somewhere between fifteen and twenty dollars depending on the make and the style of action.

Q. Should a rifle for boys' use have a light trigger pull?

A. It should be about four or five pounds and as clean as possible.

Q. I have just bought a new revolver holster. It is very stiff and the revolver fits too tight. Will oiling it help any?

A. The best way I know of to make a holster fit properly is as follows: Oil the

revolver thoroughly and wrap it carefully in oiled paper, then wet the holster in water and when it becomes soft, place the revolver in it and set it where it will dry. This will make it take the proper shape and you can oil it with leather oil afterwards to keep it from causing rust on the weapon.

Q. Is it necessary to get a license to carry a revolver in a holster in New York State if the gun is to be used for hunting and a hunting license has already been procured?

A. According to the law you will have to have a pistol permit as well as a hunting license. To get one, apply to the Chief of Police or any magistrate of any court of record.

Q. Which is the best way to sight? Should the bead be right down in the bottom of the notch or should you hold it up level with the top of the notch in the rear sight?

A. The latter method is the best by all odds for if you hold the bead right down in the bottom of the notch, you will be sure to get varying elevations according to the strength of the light and many low shots due to an optical illusion that causes the bead to disappear entirely.

Q. Is there any way to remove the double action from a revolver for target work?

A. Yes. By removing some of the parts it can be changed into a single action, but there is no advantage since the double action can be easily cocked by hand for target work and you always have the trigger controlled action for use at very close quarters.

Q. Which is the best, a gold bead front sight or an ivory one?

A. The phosphor bronze front sight, known as a "gold" bead has the advantage of being stronger and it is not liable to tarnish. On the other hand the ivory bead shows up well in almost any light when it is clean and it does not glitter and thereby cause shooting away from the light.

Q. What kind of revolver do they use for duelling with wax bullets?

A. Any .44 caliber revolver will do. The bullets are the part of the outfit that is hard to get. The best ones are imported and cannot be secured at present.

#### These Clubs Were Admitted to N. R. A. Membership During the Past Week:

##### CIVILIAN

##### Minnesota

Minneapolis Marine Rifle Club—G. R. Zieske, secretary; Frank E. Nelson, president; N. E. Anderson, vice-president; C. H. Keating, treasurer; Emil Blade, executive officer. Membership, 30.

##### New Jersey

The Colored Rifle Club of East Orange—Fred Buford, secretary; W. P. Burrell, president; Silas Chambers, Jr., vice-president; A. A. Hill, treasurer; J. W. Hudspetts, executive officer. Membership, 54.

Mendham Home Defense Rifle Club—Robert F. Lau, secretary; Edward Elliot, president; Charles Day, vice-president; Frank Groendyke, treasurer; Huch Rendall, executive officer. Membership, 78.

South Orange Village Rifle Club—E. Morgan Barradale, secretary; Capt. Stephen S. Johnson, president; Lieut. Ira T. Redfern, vice-president; Lawrence A. Norton, treasurer; Franklin Martin, executive officer. Membership, 57.

## With the Small-Bore Outdoor League

GETTING on the target for individual scores greater than 195 does not seem to be as difficult with the shooters in the N.R.A. small-bore league as it appeared during the first three weeks of the shooting.

The fourth week, the results of which have just been published, show that the high score of last week—198 made by T. K. Lee—has been duplicated by G. L. Wotkyns, of the Los Angeles Rifle and Revolver Club.

Incidentally the Los Angeles boys were apparently shooting only for 90 per cent medals in the first three matches, and less than the required quota of scores was turned in. However, this week five high men are registered and it is possible that the Californians are going to try to clean up on a whirlwind finish. If they are trying this, their work will be cut out for them unless some clubs now toward the top of the list take rapid slumps.

The high team score this week goes to the Washington, D. C., Rifle Club on exceptionally good shooting. This team totaled 961 points out of the possible 1,000 or an individual average score of 192.2. This score is also the highest for the series thus far, the first week's high score having been only 926. Each week, however, has showed a consistent increase in the team aggregate.

As a result of this excellent shooting, the Washington Rifle Club has hoisted itself from fifth place in the general aggregate to the top of the list.

There were several good individual scores in this week's shooting, O. M. Schriver and J. H. Robertson of the Washington club having each scored 197 with at least half a dozen other team members whose totals ranged between 190 and 194.

The results of the fourth week's shoot are:

1. *Washington, D. C., Rifle Club:* J. H. Robertson, 197; O. M. Schriver, 197; W. C. Robertson, 193; W. R. Stokes, 189; Robert M. Morris, 188. Club total, 961.

2. *Los Angeles, Cal., R. & R. Club:* G. L. Wotkyns, 198; L. Felsenthal, 188; E. C. Crossman, 186; E. D. Neff, 184; T. Jordan, 184. Club total, 940.

3. *Kiowa Shooting Club, Des Moines, Iowa:* W. E. Kessler, 191; C. H. Kessler, 188; B. G. Limms, 186; E. J. Fines, 184; Nick, 182. Club total, 931.

4. *Massachusetts Rifle Ass'n, Boston, Mass.:* J. H. McAlen, 190; N. C. Nash, 188; W. E. Hennell, 186; H. Marshall, 183; O. C. Gerrish, 183. Club total, 930.

5. *Milwaukee, Wis., R. & P. Club:* H. W. Mansfield, 190; Emil Teich, 185; N. E. Dahm, 184; F. M. Teich, 183; Lawrence Teich, 183. Club total, 925.

6. *Gen. Phil Kearny Rifle Club, Kearny, N. J.:* J. W. Roche, 190; John Crook, 188; John Lang, 185; P. Blauvelt, 181; S. Marshall, 178. Club total, 922.

7. *Brooklyn, N. Y., Rifle Club:* Paul F. Lahm, 184; J. W. Dearborn, 183; L. J. Miller, 183; H. Otto, 182; L. J. Corsa, 178. Club total, 910.

8. *Birmingham, Ala., Athletic Club R. & R. Ass'n:* T. K. Lee, 194; A. F. DeFuniak, 183; Frank Flinn, 177; Malven Jones, 176; Dr. P. Reid, 176. Club total, 906.

9. *Manhattan, N. Y., R. & R. Ass'n:* D. J. Gould, Jr., 193; Alfred H. Seeley, 187; Harry M. Pope, 184; K. H. Fichtner, 170; C. B. Walker, 169. Club total, 903.

10. *Jacksonville, Fla., Rifle Club:* J. H. Whitney, 186; Wm. McNamee, 183; G. W. Gray, 182; F. E. Brymer, 179; E. H. Edwards, 172. Club total, 902.

11. *Ashburnham, Mass., Rifle Club:* G. S. Hollingworth, 190; J. R. Briggs, 189; Wm. A. Barlow, 172; A. Young, 170; G. Willard, 156. Club total, 877.

12. *Scott, Ark., Rifle Club:* Jas. K. Thibault, 177; Walter Alexander, 175; R. L. Pemberton, 174; W. O. Scott, 171; Dr. Henry Thibault, 170. Club total, 867.

13. *Denver City, Colo., Rifle Club:* C. L. Butler, 192; T. H. Smith, 171; C. E. Younkman, 167; D. C. McConaughy, 163; E. L. Hanson, 161. Club total, 854.

14. *Cazenovia, N. Y., Rifle Club:* H. C. Thorne, 180; Geo. L. Woodworth, 175; Chartley Hutchinson, 167; F. D. Holdridge, 166; S. M. Thomas, 165. Club total, 853.

15. *Citizens R. & R. Club, Rochester, N. Y.:* C. B. Spraker, 180; W. W. Lewis, 176; F. C. Sherman, 169; A. G. Johnson, 166; G. S. Searle, 162. Club total, 853.

16. *Warren, Pa., R. & R. Club:* F. P. Lauffer, 178; J. A. Clark, 174; J. L. Smith, 171; F. W. Jefferson, 167; Geo. P. McAnerney, 161. Club total, 851.

17. *Norwalk, Conn., Rifle Club:* J. A. Baker, Jr., 180; W. E. Mathews, 172; Edward N. Dart, 171; A. N. Clark, 168; J. D. Milne, 157. Club total, 848.

18. *Franklin, Pa., Rifle Club:* C. S. Boswell, 184; W. W. Mackey, 167; G. B. Jobson, 166; C. H. Bronson, 165; C. M. Campbell, 163. Club total, 845.

19. *Canton, Ohio, R. & P. Club:* A. E. Hart, 184; A. N. Scott, 177; C. J. Foltz, 168; W. K. Perdue, 157; F. Swartz, 153. Club total, 839.

20. *Toledo, Ohio, R. & P. Club:* H. S. Crawford, 175; H. G. Affleck, 173; Bruce C. Wilson, 168; R. W. Roberts, 167; A. S. Davis, 149. Club total, 832.

21. *Community Rifle Club, Sherrill, N. Y.:* S. Freeman, 173; L. Lee, 172; G. Burlingarve, 168; L. Amacher, 156; W. Chesbro, 155. Club total, 824.

22. *Pentwater, Mich., Rifle Club:* E. B. Clark, 165; F. W. Cramer, 165; R. N. Lagesen, 159; W. D. Girard, 157; H. F. Sands, 154. Club total, 800.

23. *The Greater Omaha, Nebr., R. & R. Club:* W. B. Riley, 169; N. C. Nielson, 167; C. S. Mather, 165; L. A. Newhouse, 161; C. G. Riley, 136. Club total, 798.

24. *St. Johnsbury, Vt., Rifle Club:* O. E. Clark, 174; C. E. Merrill, 166; W. W. Barrett, 165; Bert Shepard, 151; C. W. Bradley, 151. Club total, 797.

25. *Middleborough, Mass., Rifle Club:* Richard G. Bowen, 177; A. S. Jinney, 169;

S. L. Brett, 154; Henry L. Pember, 153; R. P. Jenks, 142. Club total, 795.

26. *Hydraulic Rifle Club, E. Cleveland, Ohio:* E. Ginber, 175; J. Patterson, 171; M. B. Nook, 158; Fred E. Prasse, 148; Fred Ginber, 139. Club total, 791.

27. *California R. C. R. & P. Club, San Francisco, Cal.:* Paul Thelen, 160; R. M. Vangham, 159; Hellmuth Schmidt, 159; L. C. Kessing, 153; R. Ashworth, 149. Club total, 780.

28. *Ontario, Cal., Rifle Club:* F. H. Wallihan, 164; Scott Morrell, 159; C. H. Card, 154; E. D. Casler, 153; C. Petch, 150. Club total, 780.

29. *New Bedford, Mass., Rifle Club:* P. Coderre, 162; L. Desjardins, 156; A. Durocher, 153; E. Choquette, 153; A. Turcot, 153. Club total, 777.

30. *Chicago, Ill., Rifle Club:* John Turner, 169; H. F. Walbaum, 154; E. B. Witwer, 150; K. C. Robinson, 148; F. B. Roziene, 142. Club total, 763.

31. *Joliet, Ill., Rifle Club:* H. D. Grose, 176; C. McKee, 170; Leo J. Deess, 168; Rex McKee, 141; F. M. Barber, 97. Club total, 752.

32. *Antioch, Ill., Rifle Club:* B. Worman, 173; N. E. Proctor, 163; Dr. Turner, 145; Ed Garret, 127; H. Williams, 117. Club total, 725.

33. *Canyon City, Ore., Rifle Club:* C. P. Haight, 149; H. B. Cadwell, 141; H. D. Leedy, 134; Harry Allen, 132; Denver Leedy, 127. Club total, 683.

34. *Wilsall, Mont., Rifle Club:* C. E. Gilbert, 148; V. F. Ellis, 135; W. R. Vinacke, 134; R. C. Lange, 126; R. A. Cook, 113. Club total, 646.

35. *Patchogue, N. Y., Rifle Club:* Chas. C. Care, Jr., 137; L. Manhart, 132; F. P. Johnson, 130; Robt. A. Van Tuyl, 120; J. H. McKnight, 117. Club total, 636.

36. *Massena, N. Y., R. & P. Club:* F. L. Roth, 166; F. L. Actis, 149; G. T. Barnes, 132; Henry M. Hall, 96; D. J. Jones, 89. Club total, 632.

37. *Kenosha, Wis., Rifle Club:* H. C. Hart, 149; Dr. E. H. Rowell, 136; Fred H. Baum, 119; A. E. Buckmaster, 117; H. J. Mellun, 89. Club total, 610.

38. *Holbrook, Arizona, Rifle Club:* J. F. Woods, 135; Wm. Lee, Jr., 135; C. P. Cooley, 116; L. H. Mickey, 109; Chas. Osborne, 107. Club total, 594.

39. *Akron, Ohio, Rifle Association:* M. E. Fassnacht, 154; T. F. Kepler, 150; J. C. Ryder, 144; E. W. Briust, 144. Club total, 592.

NOTE:—Returns from several teams were received too late for classification.

The aggregate standing of teams at the close of the fourth week is:

1. Washington, D.C., Rifle Club.....	3717
2. Mass. Rifle Association, Boston, Mass. ....	3707
3. Milwaukee, Wisc., R. & P. Club..	3686
4. Kiowa Shooting Club, Des Moines Iowa .....	3677
5. Brooklyn, N. Y., Rifle Club.....	3674
6. Birmingham, Ala., Athletic Rifle Club .....	3669
7. Manhattan, R. & R. Club, N. Y. C.	3577
8. Toledo, Ohio, R. & P. Club.....	3436
9. Ashburnham, Mass., Rifle Club...	3428
10. Jacksonville, Fla., Rifle Club.....	3407
11. Scott, Arkansas, Rifle Club.....	3405

12. Pentwater, Michigan, Rifle Club..	3391
13. Cazenovia, N. Y. Rifle Club.....	3377
14. Franklin, Pa., Rifle Club.....	3372
15. Norwalk, Conn., Rifle Club.....	3367
16. Los Angeles, Cal., R. & R. Club..	3332
17. Canton, Ohio, R. & P. Club.....	3330
18. Denver City, Colorado, Rifle Club	3327
19. California R. C. & P. Club, San	
Francisco, Cal. ....	3282
20. Citizens R. & R. Club, Rochester,	
N. Y. ....	3282
21. Community Rifle Club, Sherrill,	
N. Y. ....	3254
22. Warren, Pa., R. & R. Club.....	3221
23. The Greater Omaha R. & R. Club,	
Omaha, Nebr. ....	3150
24. New Bedford, Mass., Rifle Club..	3145
25. Hydraulic Rifle Club, Cleveland,	
Ohio ....	3073
26. Middleborough, Mass., Rifle Club	3061
27. St. Johnsbury, Vt., Rifle Club....	3050
28. Ontario, Cal., Rifle Club.....	3041
29. Antioch, Ill., Rifle Club.....	3020
30. Joliet, Ill., Rifle Club.....	2886
31. Akron, Ohio, Rifle Association...	2811
32. Chicago, Ill., Rifle Club.....	2594
33. Wilsall, Mont., Rifle Club.....	2557
34. Canyon City, Oregon, Rifle Club	2538
35. Holbrook, Arizona, Rifle Club....	2517
36. Massena, N. Y., R. & P. Club.....	2488
37. Patchogue, N. Y., Rifle Club.....	2390
38. Kenosha, Wisc., Rifle Club.....	2361

FIRST MATCH MISSING

Gen. Phil Kearney Rifle Club, Kearney	
N. J. ....	2336

FOURTH MATCH MISSING

Malta, Mont., Rifle Club.....	1694
Olig Rifle Club, Reward, Cal.....	2465
Hoosier Rifle Club, Indianapolis, Ind.	2390
Niskayuna Rifle Club, Schnectady,	
N. Y. ....	2301
Rochester, Minn., Rifle Club.....	2028

THIRD AND FOURTH MATCHES MISSING

St. Louis, Mo., Colonial Rifle Club....	1745
Highland, Cal., Rifle Club.....	1427

SECOND, THIRD AND FOURTH MATCHES MISSING

Hopkins, Minn., Rifle Club.....	865
Litchfield, Conn., Rifle Club.....	491

NO MATCHES REPORTED

- Saranac Lake, N. Y., Rifle Club.
- Mt. Olive Rifle Club, Reedley, Colo.
- National Rifle Club, Newark, N. J.
- Long Beach, Cal., Rifle Club.

TRICOCHETS

THREE matches have been staged recently by the Boston Rifle and Revolver Club to start things going in the dull season and to celebrate the establishment of the organization in its new quarters, at 165 Washington Street, where the entire fifth floor of a large building has been turned into club rooms. The entire front of the big lounging room is of glass and looks out on Adams Square.

The range has been fitted up with eight targets with two sets of lights, so they may be used for either rifle or pistol shooting. Four of the firing points have disappearing prone benches, something on the order of a Marshall-Stearns bed.

To start things going three matches were put on to run to August 1, when three different ones were started.

Match A called for three best targets of five shots on the Equalization target, possible 125 on each. These were the winners and best scores:



IDEAL RELOADING TOOLS

Solve the Wartime Ammunition Problem  
Reloads Are Safe, Inexpensive, and Accurate

Outfits for reloading both Krag and Springfield cartridges are ready for IMMEDIATE DELIVERY.  
Orders for single tools will receive the same careful and prompt attention accorded to orders for armory outfits.  
Send 6 cents in stamps for Ideal Hand Book No. 26.

The Ideal Manufacturing Co.

Phineas M. Talcott

271 Meadow Street

New Haven, Conn.

McAleer .....	115	117	117	349
Gibbons .....	115	116	117	348
Natale .....	115	115	115	345
Standish .....	111	113	116	340

Match B was best ten shots on German ring target. The weather was against the hard work required in this match so it was not very well patronized. The scores: Standish, 246; Kimball, 241; McAleer, 240.

Match C was patterned after the U. S. R. A. pistol handicap, except re-entries were allowed. At the finish five men were tied with full scores, and on the shoot-off two again tied. The score of the shoot-off:

Standish .....	248	247
Chapman .....	248	244
Lambert .....	247	
Jones .....	245	
Kendall .....	244	

The team of the Massachusetts Rifle Association in the small-bore outdoor matches is made up largely of men who belong also to this club. They seem to be going very well so far, especially Capt. McAleer, who is the best thing we have in either club at rapid fire.

The Army and Navy have taken several of the younger members, including Natale and Center, whose absence will probably be felt in next winter's matches.

The Central Sharpshooter's Union held its eleventh biennial rifle tournament in New Glarus, Wisconsin, July 24 to July 28, 106 entries having participated in the Union tournament and 47 in the championship event. Twelve cities were represented including: Alma, Wis.; Chicago, Ill.; Davenport, Iowa; Highland, Ill.; Milwaukee, Wis.; Monroe, Wis.; Monticello, Wis.; New Glarus, Wis.; St. Louis, Mo.; Wausau, Wis.; Wheatland, Iowa, and Cincinnati, Ohio.

"Dark horse" entries during the tournament carried away some of the best prizes. William Muhl, of Wheatland, Iowa, won the King Honor Medal on a total of 225 points. The first prize on the honor target, \$100.00, fell to E. D. Ecksted, of St. Louis, Mo., with a score of 69 points. Albert Schlatter had the best hit on the Stitch and got \$35.00. The first prize on the Peoples target was captured by Senator J. C. Bardill, of Highland, Ill., with 73 points. There were three ties on the Man target, Huebner, Chicago, T. M. Watkins, Davenport, and Dr. H. Hoesly, of New Glarus, each having a possible, 60 points. Dr. Hoesly stepped out for first honor, Mr. Schindler tossed a coin and Huebner won out; he will receive the diploma. Jos. Ackerman, of Monroe, won first prize on the Wisconsin target, making the most 50s. His reward was \$50. On the New Glarus target F. Senn, of St. Louis, Mo., won the first prize of \$50.00. P. M. Watkins won a fine gold watch for shooting most points on Peoples, Man, New Glarus and Wisconsin target. A special prize of \$15 was won by P. J. Babler of Monticello, Wis., for shooting three best Man cards. The team match was a spirited one and although Davenport made a hot fight, the Willows, of Chicago, showed their superiority by

making eight points more than they made in Davenport, Ia., and thereby captured first prize and the team banner for the second time. Some of the high team scores were:

	Pts.
Willows, Chicago .....	1300
Davenport, Iowa .....	1261
Wheatland, Ill. ....	1219
Monticello, Wis. ....	1209
Monroe, Wis. ....	1198
New Glarus .....	1187
Highland, Ill. ....	1183
Highland, Ill. ....	1180
St. Louis, Mo., Swiss .....	1175
St. Louis, Mo. ....	1172
Milwaukee, Wis. ....	1120
Wausau, Wis. ....	1106
Alma .....	1070

The 100-shot championship was shot July 27th. C. T. Westergaard again showed what he could do in a long run by capturing first prize, a fine gold medal; his score was 2209 points. F. Dulleck was second, with 2199 points, Gus. Schweizer won first prize on the honor, making 73 points; all three belong to the Willows.

Shooting .22 calibre shot Lesmok ammunition, D. Donohoe of the Englewood, Pennsylvania, Rifle and Revolver Club qualified as a sharpshooter on a score of 198 and J. Coleman, as a marksman on a score of 184, using the new small-bore outdoor course. The rifles used were Winchester muskets, equipped with Krag rear and bead front sights. Concerning the shooting the secretary of the club says that the .22 calibre ammunition seemed to carry well at all distances except 150 yards. The day was gusty, however, and the boys believe that in calm weather the short cartridges will do good work.

The Englewood club, being a new organization, was unable to take advantage of the free issue before it was suspended, and plans to do most of its outdoor work with the small-bore weapons.

The Long Island Gun and Rifle Club, on August 7, staged a 50-shot match at 50 yards, on the 4-inch bull 1/4-inch ring target. The completion was shot with .22 calibre rifles. The results, out of a possible 500, were:

A. Hubalek .....	476
H. Pope .....	464
J. Kaufman .....	464
C. Johnson, of Philadelphia .....	464
H. Keim .....	458
M. Baal .....	456
J. Ward .....	421

The Members' Match was shot by the Kane, Wyoming, Rifle Club, on January 27th, 27 members taking part. R. L. Griffith won the match with a score of 43 slow fire.

The Members' Match was shot by the Savoy, Illinois, Rifle Club on April 30th. Twelve members took part and W. S. Redhed won the match with a score of 92.



# SAVAGE ARMS CORPORATION

Manufacturer of

LEWIS AUTOMATIC MACHINE GUNS  
HIGH-POWER and SMALL CALIBER  
SPORTING RIFLES  
AUTOMATIC PISTOLS and AMMUNITION

Factories: UTICA, NEW YORK, U. S. A.  
Executive Offices: 50 CHURCH STREET, NEW YORK CITY



J. Rogers won the Members' Match held by the Mesa, Arizona, Rifle Club on March 8th, with a score of 101.

Thirteen qualifications have been reported by the Harrisburg, Pennsylvania, Rifle Club, eleven under the new course and two under the old course. Those under the new course are:

Expert—J. R. Mattern, 152.  
Sharpshooters—C. E. P. Murray, 150; R. C. Batley, 174; S. W. Wittenmyer, 152; C. W. Senseman, 163.

Marksmen—John C. Herman, 161; W. O. Hickok, 3rd, 188; J. H. Ferrier, 163; J. Harvey Hutchinson, 166; W. R. Lutz, 166; Richard Coover, 166.

Those under the old course are:  
Experts—C. S. Landis, 215; Geo. W. Thompson, 219.

Six expert qualifications have been reported by the Redlands, California, Rifle Club under the old course. They are:

Jos. A. Patterson, 225; Chas. W. Hobbs, Jr., 216; Jackson Rigby, 223; C. F. Smith, 217; Thomas Sanborn, 225; Lee Dagne, 210.

The Central Rifle and Revolver Club of Des Moines, Iowa, has reported four qualifications under the old course. They are:

Experts—T. H. Winfrey, 220; A. T. Carter, 219.  
Sharpshooter—B. O. Spear, 196.  
Marksman—Ralph Geary, 169.

The Members' Match was shot by the Roseville, Ohio, Rifle Club on June 3rd, 1917. Twenty-five members took part and R. B. Elliott won the match with a score of 137.

Austin T. Parker won the Members' Match held by the Redlands, California, Rifle Club with a score of 140. The match was shot on June 3rd, 1917, and 29 members took part.

The Members' Match was shot by the Marfa, Texas, Rifle Club on July 4th. Ten members took part and Mr. T. M. Wilson won the match with a score of 136.

### The National Board for Promotion of Rifle Practice:

President, Hon. Wm. M. Ingraham, Assistant Secretary of War.  
Recorder, Capt. Frank R. Curtis, U. S. A.  
Assistant Recorder, Brig. Gen. Fred H. Phillips, Jr., Tennessee.  
Brig. Gen. C. D. Galtner, Maryland.  
Brig. Gen. Lee S. Tillotson, Vermont.  
Brig. Gen. Chas. W. Thomas, California.  
Col. G. W. McIver, U. S. A.  
Col. Wm. Libbey, New Jersey.

Maj. Palmer E. Pierce, U. S. A.  
Maj. William C. Harlee, U. S. M. C.  
Maj. Thomas Holcomb, Jr., U. S. M. C.

### Officers of the National Rifle Association of America, for the Year 1917:

President, Col. William Libbey, New Jersey.  
First Vice-President, Maj. W. C. Harlee, U. S. M. C.  
Second Vice-President, Maj. Smith W. Brookhart, Iowa.  
Third Vice-President, C. C. Crossman, Missouri.  
Treasurer, Lieut. Col. David M. Flynn, New Jersey.  
Secretary, Brig. Gen. Fred H. Phillips, Jr., Tennessee. (Woodward Building, Washington, D. C.)

### Additional Members of Executive Committee:

Brig. Gen. Fred B. Wood, Minnesota.  
Col. John J. Dooley, Maine.  
Lieut. Col. E. B. Bruch, New York.  
Col. S. W. Miller, U. S. A., representative of the Assistant Secretary of War.  
Maj. Thomas Holcomb, Jr., U. S. M. C., representative of the Assistant Secretary of the Navy.

### State Secretaries of the National Rifle Association of America:

Note: Secretaries whose names are followed by asterisk are on active duty.  
Alabama, Major Cliff S. Price\*.....Mobile  
Arizona, George J. Roskuge.....Tucson  
Arkansas, Maj. H. F. Fredeman.....Little Rock  
California, Brig. Gen. James J. Borree, A. G. O., Sacramento  
Colorado, Capt. Clifford D. Davidson, Care A. G. O., Denver  
Connecticut, Major Earl D. Church.....Niantic  
Delaware.....Lt. T. G. Samworth, Wilmington  
Florida, Major H. M. Snow, Jr.....St. Augustine  
Georgia, Major W. T. Spratt, Jr.....Atlanta  
Idaho, R. E. Herrick.....Box 1447, Boise  
Illinois, Col. W. H. Whigam,\* 1330 N. Clark St. Chicago  
Indiana, Gen. Chas. A. Gerrard.....Indianapolis  
Iowa, Capt. Emil C. Johnson.....Council Bluffs  
Kansas, Major Bruce Griffith.....Wichita  
Kentucky, Major Jackson Morris, care A. G. O. Frankfort  
Louisiana, Charles Heitkamp, 307 St. Charles St., New Orleans  
Maine, Major Gilbert M. Elliott.....Brunswick  
Maryland, Major S. J. Fort.....Catonsville  
Massachusetts, Major John M. Portal.....Woburn  
Michigan, Major M. J. Philips.....Owosso  
Minnesota, Major Orris E. Lee\*.....Stillwater  
Mississippi, Major Geo. E. Hogaboom.....Vicksburg  
Missouri, C. C. Crossman, 416 N. 4th St., St. Louis  
Montana, Wm. R. Strong, State Land Office, Helena  
Nevada, S. H. Day.....Carson City  
Nebraska, Major John M. Birkner.....Lincoln  
New Hampshire, Capt. Alonzo L. McKinley, Nashua  
New Jersey, Lieut. Col. Wm. A. Tewes, 39 Gautier St., Jersey City  
New Mexico, Capt. Norman L. King\*.....Santa Fe  
New York, Major Fred M. Waterbury\* 829 Municipal Bldg., N. Y. C.  
North Carolina, Lieut. Reid Morrison, Mooresville  
North Dakota.....  
Ohio, Col. Edw. T. Miller.....Columbus  
Oklahoma, Capt. Sam Harrelson, A. G. O., Oklahoma City  
Oregon, Sergt. J. S. Hyatt, 8th Co., C. A. C., Portland  
Pennsylvania, Major W. P. Clark, 409 E. 3d St., Williamsport  
Rhode Island, Lieut. Henry D. C. DuBois, 19 College St., Providence  
South Carolina, D. M. Ariail.....Graniteville  
South Dakota, Capt. Otto B. Linstad.....Pierre  
Tennessee, Brig. Gen. Fred H. Phillips, Jr. Washington, D. C.

Texas, Gen. O. C. Guessaz.....San Antonio  
Utah, M. A. Keyser, 238 W. 2d South St., Salt Lake City  
Vermont, Lieut. S. S. Cushing.....St. Albans  
Virginia, Major Alfred B. Percy.....Lynchburg  
Washington, Capt. Fred V. Berger, A. G. O., Seattle  
West Virginia, Freeman Carte, A. G. O., Charleston  
Wisconsin, S. S. Hauxhurst.....Milwaukee  
Wyoming, Major Charles W. Sheldon.....Sheridan  
Porto Rico, Joseph A. Rose.....San Juan

### 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.

FOR SALE—Rifle trunks, marine and British shooting bags, imported telescopes, British cleaning rods and brushes, shooting glasses, rifle rests, British micrometers and verniers, telescope rests, Marble cleaning rods and brushes; locking front sight protector and rear sight cover, Hoppe No. 9; bull's-eye score books, Marine score book, sweat bands, elbow pads, the adjustable shoulder pad, gun covers, "Never Nickel" lubricant. Motter paste, rim oil Winchester oil, barrel gauges, Marble field and rifle cleaner, cleaning patches, all kinds and calibers of brushes, Spitzer greaser, Mobile lubricant, Ideal micrometer, B. S. A. Rifle Saitpaste, Elliott ear protector, gun bore wicks, revolver and pistol rods, rifleman's Favorite sight, black; barrel reflectors, officers' hat cords. Send for catalog and price list. P. J. O'Hare, Importer and Manufacturer of Shooting Accessories, 33 Bruce St., Newark, N. J.

LARGE COLLECTION antique fire-arms, blunderbusses, daggers, powder horns, spears, catalogue 6c. Ye Olde Curiosity Shop, 33 South 18th St., Philadelphia, Pa.

FOR SALE—New Krag, \$16.00 (strap); Luger, \$35.00, nearly new; .22 Colt Pol. Pos, \$15.00 (new); .32 Colt automatic, \$15.00 (new); .22 Colt automatic, \$25.00 (new); .22 S. & W. Target pistol, \$15.00; .22 Winchester Musket, \$14.00 (new). All in "gun crank" condition. Address M. L. Wixon, 390 Tremont St., Boston, Mass.

WANTED—Le Maire Marine Binoculars from 10 to 15 power, large objective, with privilege of examination. Address stating price and condition, L. C. Newman, 1024 Wisconsin Avenue, Northwest, Washington, D. C.

FOR SALE—.22 Colts Automatic pistol; .45 Colts Automatic pistol; .22 Savage automatic rifle; .22 caliber 1897 Marlin rifle, engraved, fitted with Winchester 3B telescope sight; Stevens 414 rifle, fitted with Winchester 3B telescope sight; .22 caliber No. 35 Stevens pistol; 22/32 S. & W. revolver; 38 S. & W. 4-inch police revolver; 12 ga. CE grade Fox double-barrel shotgun; 20 ga. A grade Fox double-barrel shotgun; 2 Stevens 12 ga. single-barrel trap guns. All guns in new condition. Want cash or high grade pump gun. Claude McKinney, Van Alstyne, Texas.

FOR SALE—Shooting and Fishing and Arms and the Man, 1897 to date. Outer's Book, 1912 to date. Rod & Gun, 1875-6-7. Large Radiotelescope outfit. Fine 22/35 Stevens rifle with extra 30/25 Savage bbl. .28/30 Pope barrel, 4x5 Kodak. All full outfits in A-1 condition. W. Angle lens, 21 vol. Photo journals. .32 and .8 patched bullets. Send stamps for data. Thomas Martin, 8 Drummond St., G.H. Sta., Boston, Mass.

# Championships Precede

## Grand American Handicap

By PETER P. CARNEY  
Editor National Sports Syndicate

WHILE the Grand American Handicap Trapshooting Tournament does not get under way officially until Monday, August 20th, there will be several trapshooting competitions of importance decided over the traps of the South Shore Country Club, Chicago, Ill., on Sunday afternoon, August 19th.

These competitions will be the double target event for the Hazard trophy, emblematic of the world's championship, the 100-target race for the Richardson Memorial trophy, and the all-round championships—amateur and open—at 200 targets. These competitions will bring out some of the classiest trapshooters in the country.

The Hazard cup has been in competition for many years. It was formerly a live bird trophy, but when the killing of live birds ceased to be a sport the trophy migrated to the trapshooting ranks. The first two times it was shot for Fred Gilbert defeated Lester German and Fred Bills. Then it went into open competition and Sam Huntley won it. Challenged immediately, Huntley defended the title against Lester German, and on the following day defended it against R. W. Clancy. Guy Dering won it in open competition in 1915 and retained it in a match with Del Gross the same year. George Nicolai defeated Dering for the trophy at St. Louis last August and this year Charles G. Spencer and William Ridley won the trophy in open competition. Ridley has been challenged to shoot for the trophy by A. H. Winkler, of Chicago, Ill., and has accepted, and the race will be shot off during the afternoon of August 19th.

The all-round amateur and professional trophies are in their first year. They were shot for at the Grand American in St. Louis last August for the first time. The trophies go into open competition every year at the Grand American. During the remainder of the year they are challenge trophies. The open championship was won by Homer Clark, professional, and as no one challenged him for the trophy during the year he is still the holder.

There was considerable competition for the amateur trophy, however. Edward Bartlett won it the first time and later lost it to Fred Plum. Plum defended the title against F. S. Wright, and then shot a tie with J. R. Jahn. On the shoot-off Jahn won. Since then Jahn defended the title against A. R. Bottger and lost to A. H. Winkler, challenger for the Hazard trophy. In this competition the shooters fire at 50 targets from 18 yards, 50 from 20 yards, 50 from 22 yards, and 25 pairs from 16 yards.

The competition for the Hazard trophy is 100 pairs from 16 yards.

The Richardson Memorial trophy is a present from the Sportsmen of Delaware in memory of A. B. Richardson, for many years before his untimely death last summer the best of Delaware trapshots. This competition will be at 100 targets—20 from 16 yards, 20 from 17 yards, 20 from 18 yards, 20 from 19 yards, 20 from 20 yards. This trophy will be won outright by the shooter making the best score. There will be no entrance fee, the only cost to the participant being the price of his targets. The trophy stands 13 inches high and is valued at \$200.

In connection with the Grand American, it is interesting to note that thirty-three years ago a number of shotgun enthusiasts met at Chicago to take part in the first

trapshooting tournament, of which there is any record. The title of the shoot was the "First National Inanimate Target Tourny," and it was won by the Exeter Gun Club, of Exeter, New Hampshire.

The tournament was conducted under the management of J. E. Bloom, of the Ligowsky Company. The clay pigeons manufactured by the Ligowsky Company were the first to be successfully thrown with bird-like flight from a trap.

These facts which have such great importance as part of the history of trapshooting in the United States were brought to light a few weeks ago at a reunion of the old Exeter Gun Club team. The

veterans were photographed at this reunion after a period of 33 years.

Chicago this year will again be the scene of the national target tournament, as the Grand American Handicap Trapshooting tournament will take place over the 14 traps of the South Shore Country Club, adjoining Jackson Park, on August 20, 21, 22, 23 and 24.

It didn't take very long to complete the trapshooting tournament of 33 years ago. One trap and a handful of shooters turned out. It is quite different today, when it takes 14 traps of the most modern make to accommodate the shooters and five days to complete the program. All big things, however, have small beginnings.

"Drinking one of them Frenchy beers," said a British soldier of wide experience, "is like kissin' yer sister!"

Monaco's army is the smallest in the world. It consists of 75 guards, 75 carabinieri, and 20 firemen.

### THESE TRAPSHOOTERS WILL COMPETE FOR NATIONAL TITLE

The National Amateur Trapshooting Championship will be held at the South Shore Country Club, Chicago, Ill., on Tuesday, August 21, at 3 o'clock. It is one of the events on the Grand American Handicap tournament program. Winners of State trapshooting championships, or runners up, in case the champion cannot attend, are the only ones who can shoot in this event. Here is the list of leigibles:

State	Champion	Score	Runner-up	Score
Alabama	Dr. A. Lawson	99	T. K. Lee	98
Arkansas	J. E. Chatfield	96	W. J. Buchanan	96
Arizona	C. P. Cooley	87	H. P. De Mund	87
Atlantic Fleet	F. P. Williams	90	C. B. Landenberger	82
California-Nevada	F. H. Mellus	99	C. A. Nash	98
Colorado-New Mex.	R. A. King	99	J. H. Rohrer	97
Connecticut	W. A. Flynn	98	L. H. Bradley	94
Delaware	L. R. Beauchamp	94	H. L. Morgan	94
Florida	G. W. Ball	97	C. E. Sands	96
Georgia	W. H. Jones	97	W. H. Lanier	97
Idaho	D. J. Holohan	96	E. White	94
Indiana	Dr. W. L. Straughan	99	C. D. McGary	97
Iowa	J. R. Jahn	98	Art Castle	97
Illinois	Mark Arie	98	A. H. Winkler	97
Kansas	Steve Hoyne	97	W. E. Hugg	96
Kentucky	Z. C. Offutt	95	B. D. Goff	95
Louisiana	H. T. Wadley	95	J. T. Austin	90
Michigan	C. A. Gailbraith	100	H. H. Coburn	98
Missouri	Harve Dixon	99	C. B. Eaton	98
Mississippi	Lloyd Matlack	92	Thos. Green	92
Maryland-D. C.	J. S. Michael	97	W. D. Monroe	97
Montana	H. Schnack	98	J. C. Norris	96
Minnesota	C. A. Mason	99	Dr. F. H. Allen	99
Maine	E. A. Randall	94	C. P. Allen	94
Massachusetts	S. W. Putnam	98	Jay Clarke, Jr.	98
New Jersey	C. B. Platt	100	C. W. Speer	99
New York	H. J. Pendergast	100	G. N. Fish	98
New Hampshire	E. E. Reed	93	C. F. Isola	91
Nebraska	C. L. Waggoner	95	E. W. Smith	94
North Carolina	J. B. Pennington	97	W. L. Hefner	90
North Dakota	A. R. Chezik	92	Thos. Forde	92
Oklahoma	George Lewis	98	W. H. Wilson	97
Oregon	J. W. Seavey	98	Frank Templeton	96
Ohio	F. E. Brint	99	Dr. P. P. Gintzel	99
Pennsylvania	Ray McIntyre	100	Allan Heil	99
Rhode Island	W. J. Weaver	97	W. T. Bowler	96
South Dakota	E. T. Meyers	98	R. H. Chase	97
South Carolina	J. H. Staples	96	J. G. Chafee	95
Texas	F. W. McNeir	98	E. F. Forsgard	98
Tennessee	J. H. Fite	99	Thos. Hale	99
Utah	C. H. Reilley, Jr.	97	H. S. Mills	94
Vermont	D. M. Barclay	99	Dr. C. H. Burr	95
Virginia	Dr. L. G. Richards	99	H. C. Laird	95
Washington	J. H. Hopkins	97	C. E. McKelvey	96
Wisconsin	C. H. Lawson	99	C. T. Meloy	98
Wyoming	J. H. Bradfield	91	H. C. Saul	91
West Virginia	W. E. Myers	98	J. B. Lallance	96

A New Pistol Powder!

# Du Pont Pistol Powder No. 3

A dense, nitrocellulose powder  
Cool-burning Non-erosive Accurate  
Easy to load  
For revolvers and automatic  
pistols

RIFLE SMOKELESS DIVISION  
E. I. du Pont de Nemours & Co.  
WILMINGTON, DEL.

Your Rifle <sup>OR</sup> GUN Kept Clean

Without Cleaning

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. Bore may be even more brilliant when Safetipaste is wiped out before firing again. Safetipaste is soap-like and assists washing of hands. Invaluable for hunting and knockabout rifles and guns especially when benches, vises and refined cleaning apparatus are not available.

Sold in tubes by  
**SCHOVERLING, DALY &  
GALES**

302 Broadway, New York  
And by most gun dealers

Inventors and  
Sole Manufacturers  
**THE BIRMINGHAM SMALL  
ARMS COMPANY, Ltd.**  
Birmingham, England  
Makers of Rifles and Machine Guns  
for British and Foreign Governments



The Wonderful Results Obtained  
by Using

**J. L. N. Gunoyle**

Makes it necessary for every rifle-  
man to have it in his kit.

The most perfect solvent for nitro  
powder.

Sample on Request

E. HALSTEAD HAVEN  
95 FRONT STREET NEW YORK CITY

**F R E E S A M P L E**

**IDEAL GUN PATCHES**

**WRITE TODAY**

Ideal Gun Patches, specially prepared for .30 calibre rifle, are just the right size and very convenient. We will send 1800 of these patches, express prepaid, on receipt of \$1.00.

**THE IDEAL CHEMICAL COMPANY**  
27 McLean Street Wilkes-Barre, Pa.

**Aiken Rifle Range Target**

Official Army Target in use on all  
State and Government Ranges

BUY DIRECT FROM THE FACTORY

For prices write to

**The Aiken Engineering Company**  
WINTHROP HARBOR ILLINOIS

THE NATIONAL RIFLE ASSOCIATION HAS GIVEN AN ORDER FOR

## FIFTY SERVICE TARGETS

To insure immediate deliveries to Rifle Clubs desiring to install outdoor ranges. These targets are of steel construction, strong and durable. They are light running and make pit service a pleasure instead of work.

The targets operate as single sash, speed up the firing line, avoid confusion in scoring and reduce target pasting and changing to a minimum.

Service Targets Complete, \$50.00      Standards, \$1.50  
Interior Frames: 4 x 6, \$1.10    6 x 6, \$1.20    6 x 10, \$1.70



# The New N. R. A. "Target" Model

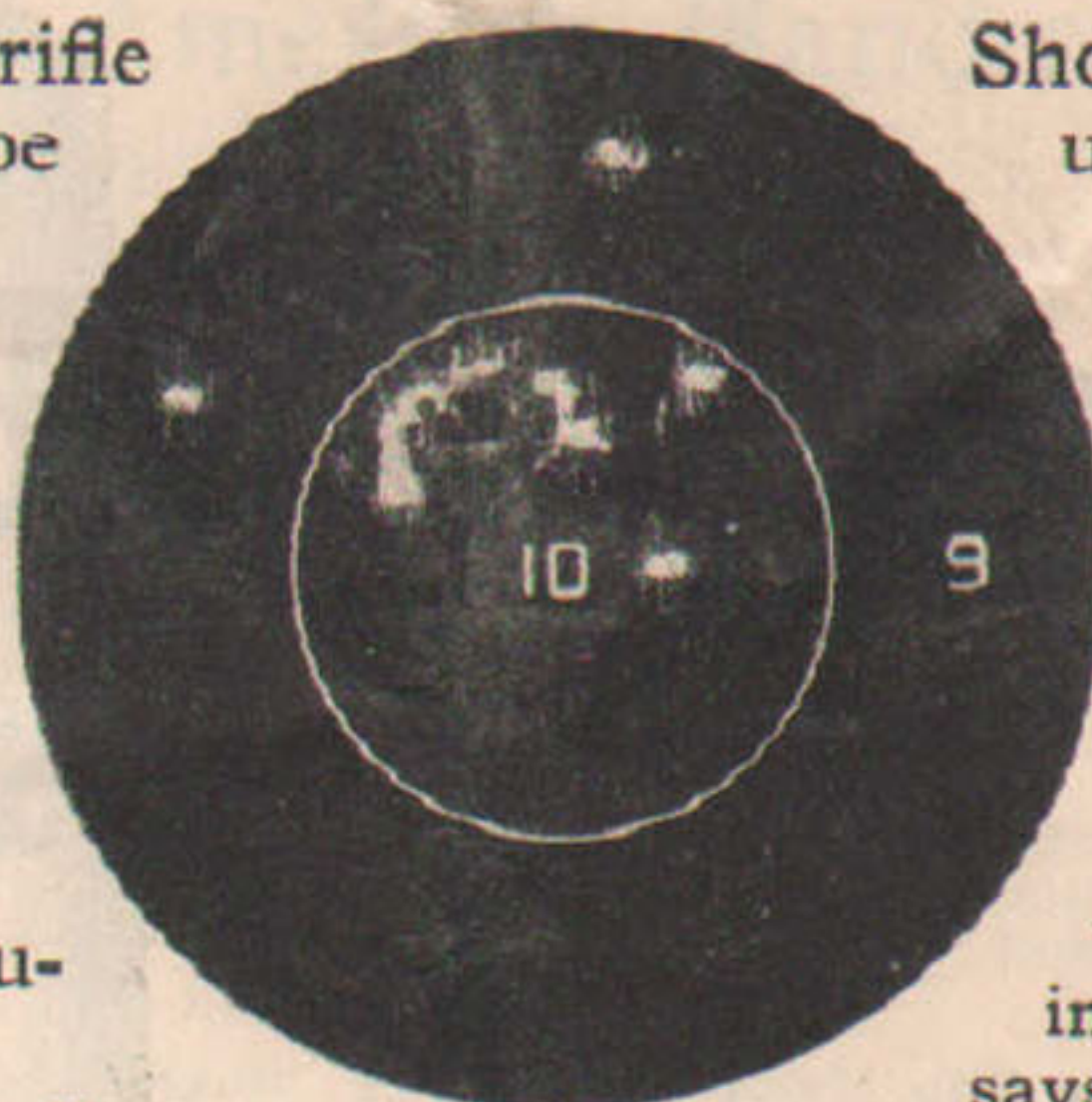
## Repeater for the Small Bore League



One of the many good points of this rifle is that ten Long Rifle cartridges may be loaded into the magazine at one time, which permits the shooter to concentrate his entire attention on sighting and aiming. The rifle is also adapted to rapid fire shooting in any position.

The target shown was made in the prone position outdoors at 100 yards. It demonstrates conclusively the accuracy of this excellent rifle.

The new model is chambered especially for the .22 Long Rifle cartridge but the .22



10 shots at 100 yds. prone  
Reproduction one-half size

Short and .22 Long cartridges may also be used. The barrel is twenty-four inches in length with sixteen inch twist; pistol grip walnut stock fitted with steel butt plate; take down; windgauge globe and aperture front sight and elevating rear peep sight fitted with target disc. Weight of rifle about six pounds.

T. K. Lee, of Birmingham, Ala., one of the leading American small bore shots, speaking of his practical experience with this rifle, says: "It is a very good rifle. My opinion of it is that it will prove the 'hold' of the most expert. It surely does shoot surprisingly well."



Model 12 C-N.R.A. "Target"  
Grade Repeater

The Remington Arms Union Metallic Cartridge Company, Inc.

Largest Manufacturers of Firearms and Ammunition in the World

WOOLWORTH BUILDING

NEW YORK CITY

## CHARACTER

CAN be expressed in printing, as in a portrait, by a master.

Our printing—magazines, de luxe volumes, monographs, brochures, catalogs, booklets and every creation of the art of Cadmus—possesses *character*.

Products which project the personality and individuality of our clients, constitute the secret of our success.

Thomsen-Bryan-Ellis Company

WASHINGTON

BALTIMORE

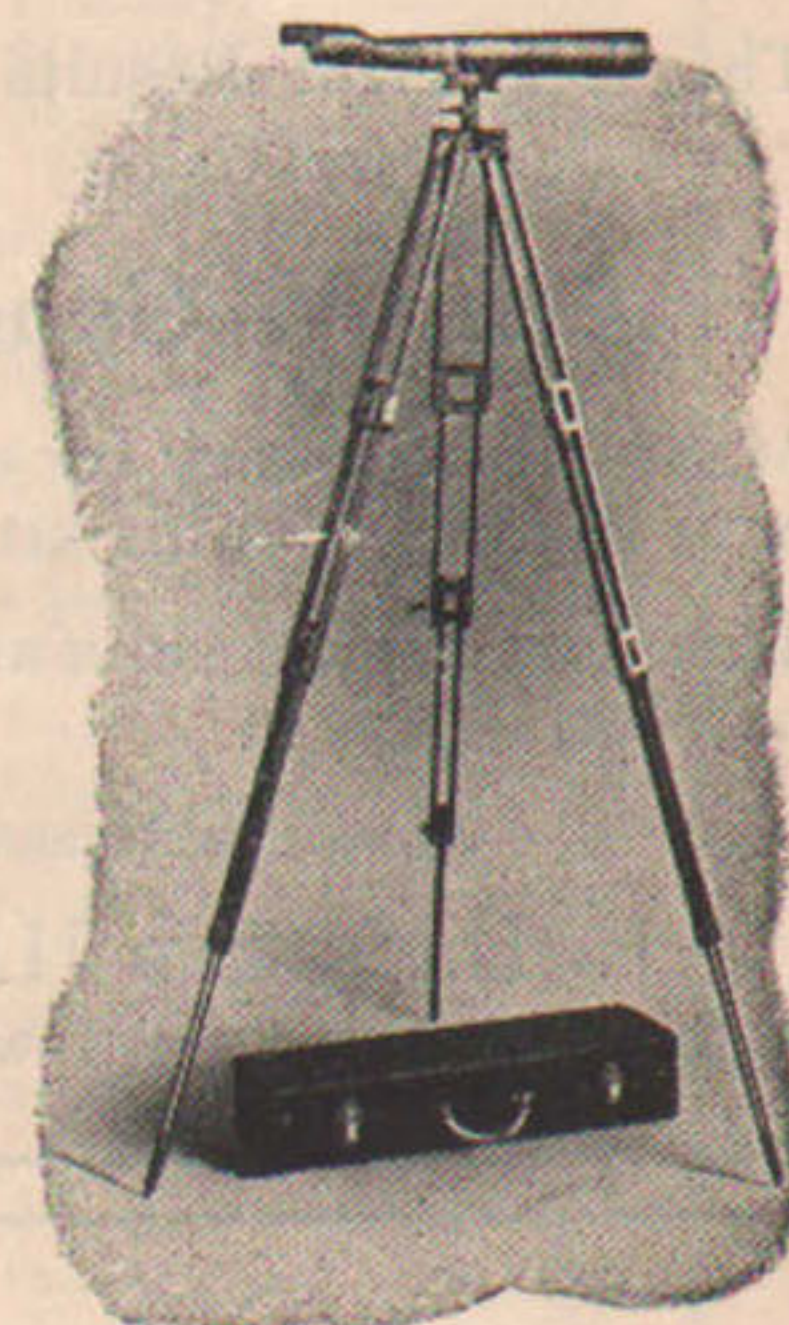
NEW YORK  
Woolworth Building

PHILADELPHIA  
Widener Building

## Prism Terrestrial Telescope

Specifications

Objective—clear aperture...2 inches  
Powers—two eye pieces....25 and 50  
Length of telescope.....21½ inches  
Weight of telescope.....2½ pounds  
Weight of tripod and alt-azimuth mounting.....4 pounds  
Weight complete with carrying case.....12 pounds  
Dimensions of carrying case, 24x6½ x4½ inches.



The Warner & Swasey Co.  
Cleveland, Ohio



## The Kerr Gun Sling

(Patented)

### Has These Advantages

Pull Down on this strap to tighten and Up to loosen

Quick and easy adjustment of arm loop to steady aim and take up recoil. No holes in material with consequent increased strength and durability. Can be fitted to Springfield, Krag, Enfield or sporting rifle in leather or webbing; if in webbing COSTS LESS, is less bulky, more pliable and lighter.

Its efficiency is evidenced by its adoption for use in the United States Army, Navy and Marine Corps.

Manufactured and controlled by

THE KERR ADJUSTABLE STRAP CO., Inc., 40 Cedar Street, New York City

Write for circular and prices