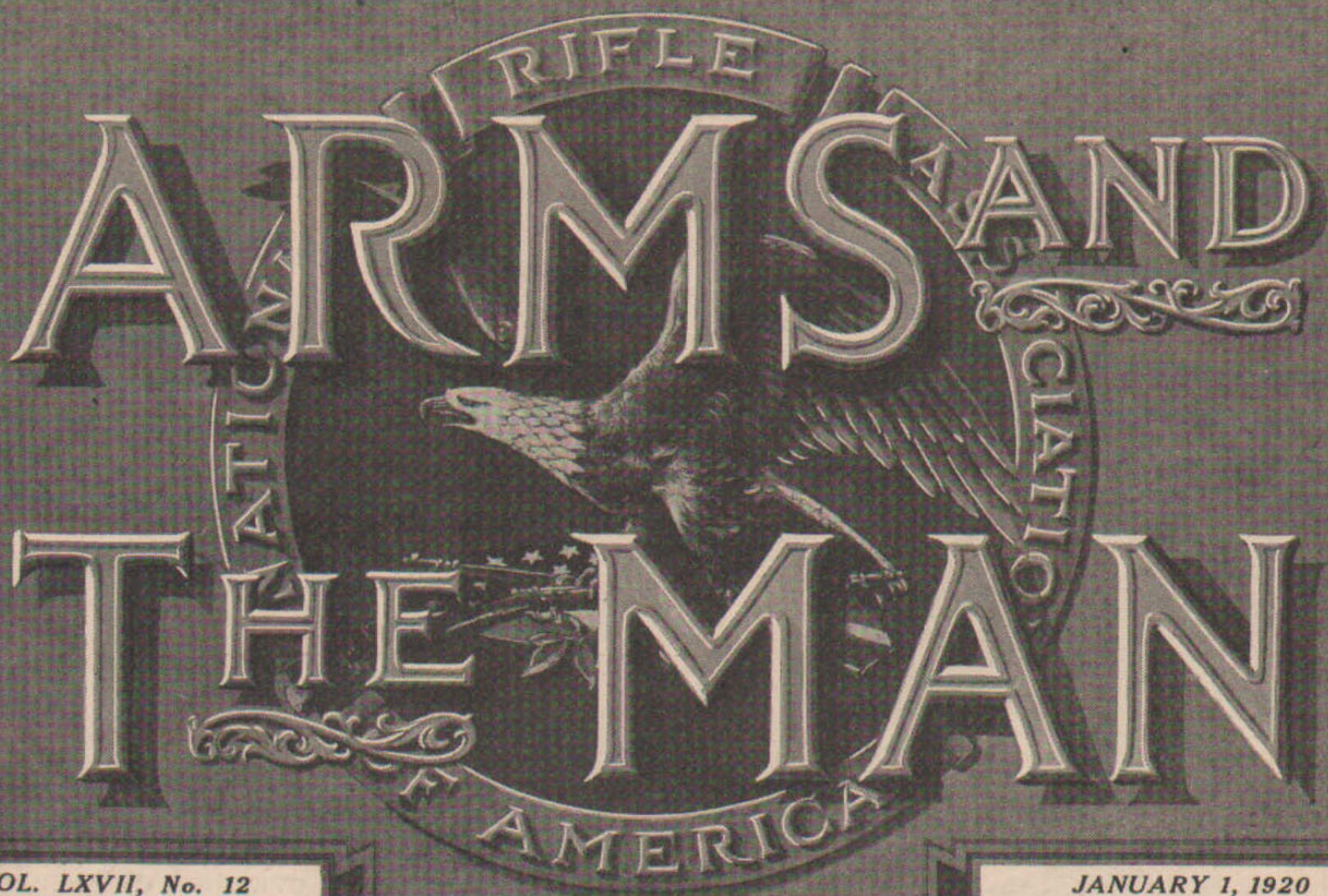
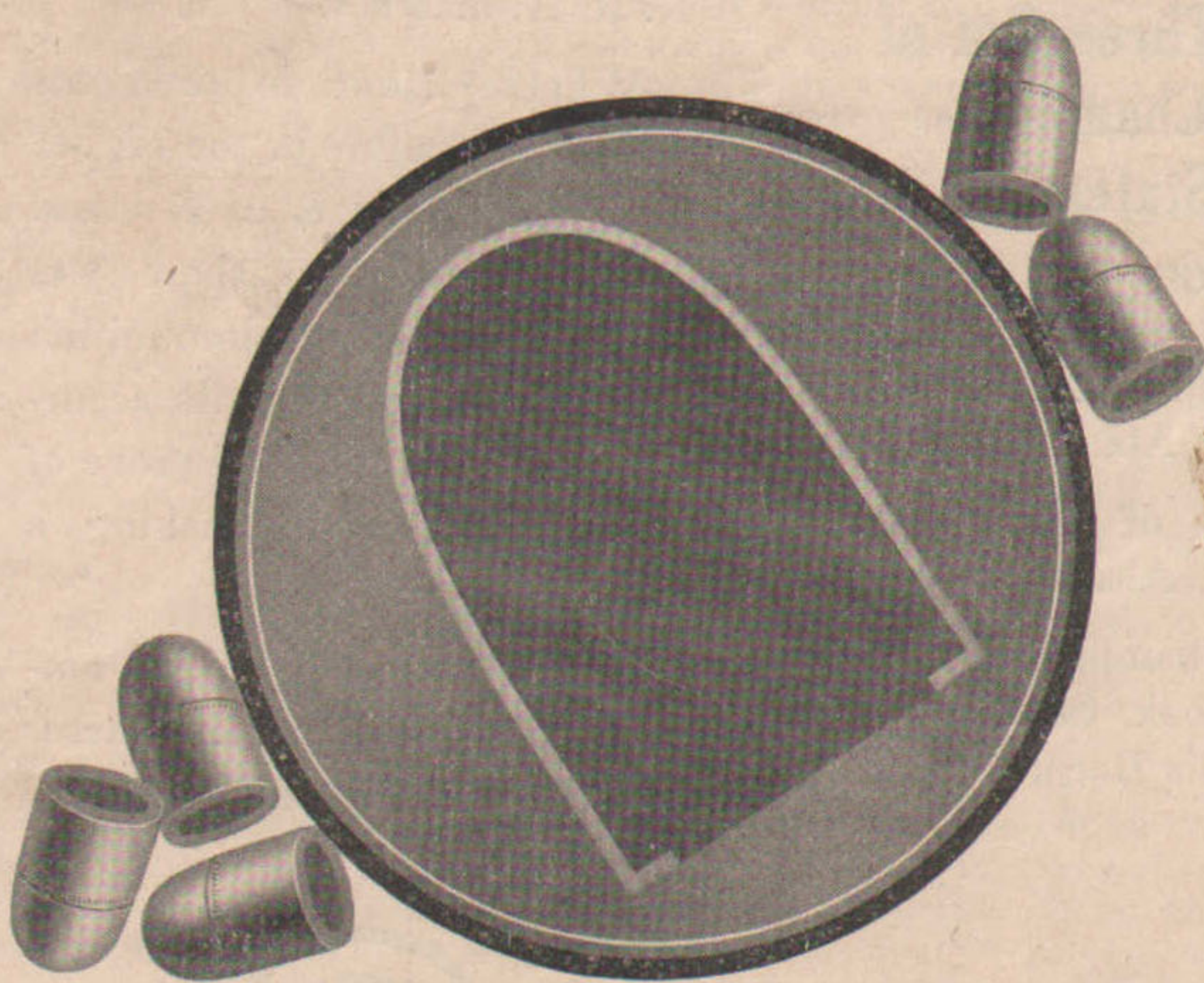


THE AMERICAN RIFLEMAN'S MAGAZINE



VOL. LXVII, No. 12

JANUARY 1, 1920



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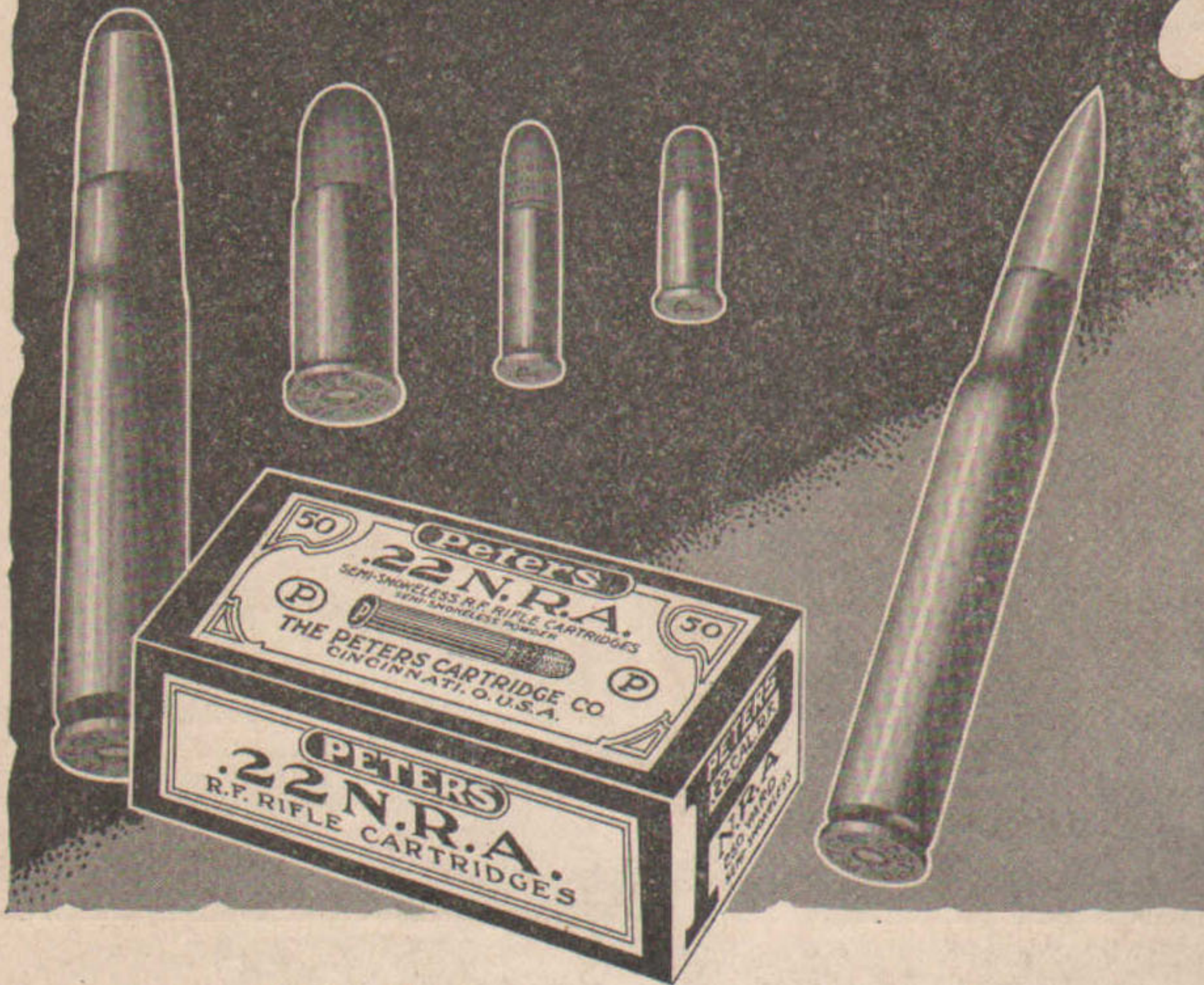
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Match "C" (Individual Military Championship of America), Dr. J. H. Snook, Columbus, Ohio, 651x750. World's Record.

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The Official Organ of the National Rifle Association of America

Volume LXVII, No. 12

WASHINGTON, D. C., January 1, 1920

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A single day's experience of two riflemen in a real New Brunswick game country, wherein each hunts independently of the other. A remarkable coincidence and easily the best hunting story of the year.

Part I. By LT. COL. TOWNSEND WHELEN

FOR three weeks we had been having dry weather, and the leaves were so noisy that still hunting was out of the question. Practically all the moose in the country had gathered up on the east side of the Black Peaks, a huge range of mountains to the east of the Tobique River. It would not do to go up there after them, for you could not get near them without their hearing you first, and an attempt would just mean driving them into some other country—Lord knows where. So we left them alone, and busied ourselves helping Charlie put out his traps for the winter. I knocked over a small deer for meat, and George, the cook, got all the grouse we wanted right around camp by throwing chunks of wood at them. Also, he caught delicious trout through the ice of the little lake.

But on the 12th of November our luck changed, and a heavy rain set in and kept up the whole day. Shortly after dark it changed to snow, and all that night we could hear the gentle pit, pit of the big flakes on the bark roof of the lean-to. We were up long before daybreak the next morning. After a good breakfast of prunes, oatmeal and deer liver, we packed our rucksacks with plenty of venison and bannocks to last us a couple of days and started out. Col. Honeycutt was hunting with Charlie Barker, who decided to take the day off from his trap line. This released Honeycutt's guide, Sandy Parish, so I took him along with me. We started off together for the first mile through six inches of the finest tracking snow a hunter could wish for. Before we separated we jumped two bunches of deer. Up near Little Fish Lake, Honeycutt and Charlie left us and started for one of the southernmost of the Black Peaks, while Sandy and I pointed our noses for a section about five miles

north. Day was just breaking, with a light wind from the west—ideal conditions—enough wind to keep the scent from eddying around through the thick woods, enough snow to deaden all noise, and absolutely fresh snow.

Swiftly but noiselessly we traveled, every sense alert and eyes skinned. I led off with my old anti-corro Springfield in the hollow of my left arm, bottom of the rifle uppermost, so that the action would not get full of snow, glove off the right hand so as to be ready. At first the snow told us nothing, it was too new, nothing had passed. Then gradually it began to tell of the doings of the woods folks; first a squirrel, then a snowshoe rabbit had passed; next the tracks of a doe and nearly grown fawn, and then the big bear-like tracks of a fisher, now very rare and only found in the real wilderness. Then more deer tracks galore, and suddenly I was conscious of something to the right. About 150 yards off I spied a big buck trotting leisurely. It may seem strange to

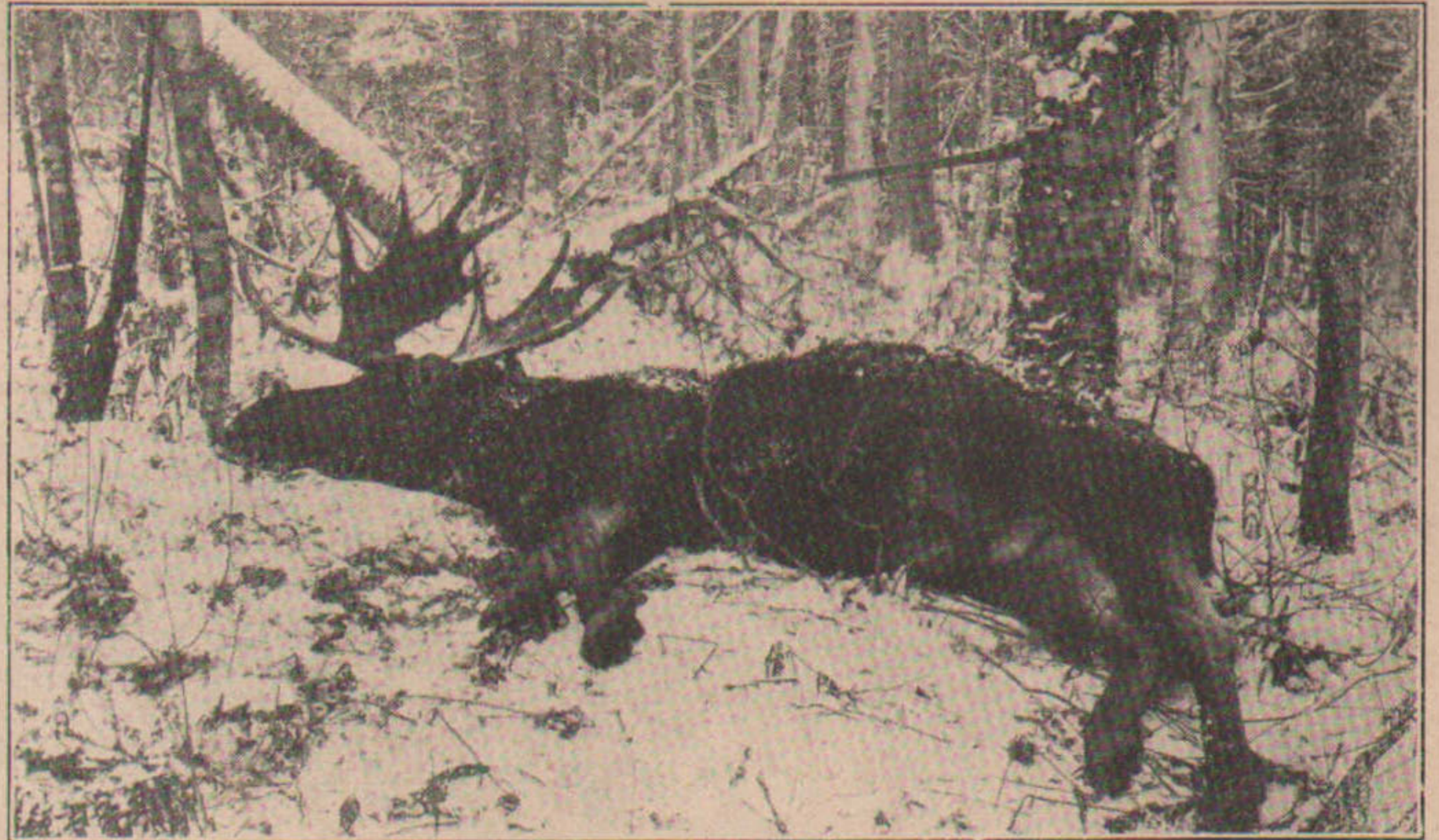
those who have never hunted much alone, but of late years I always seem to be conscious that something is coming or that game is in a certain place some little time before I really see it. So it was this time that I knew something was coming before it hove in sight. Now I did not have a good white-tail head, and I wanted that buck badly, so as he trotted out from behind a big dead stub I drew a bead just behind the shoulder and carefully eased off. Off the buck ran, but it was not the leaping bound of an unhurt deer, but instead a humped-up rush with tail down, which proclaims the heart shot, and about 100 yards on we found him, a nice plump buck with a very fine head. The 172-grain Newton bullet had struck exactly where I called it, and was lying under the skin on the opposite side. We propped the buck up and I photographed it. (It may be interesting to the amateur photographer to know that the November light in New Brunswick is so dim that each of the photographs here shown, and which were properly exposed, required six seconds exposure at F 22, mild sunlight, Kodak speed film.) Then we skinned him out, cut off the head, and hung up the tenderloin, which is the only part of a buck which is really fit to eat in the rutting season. The skin and head I put in my rucksack, and we started on again.

We had not gone more than 300 yards before we came across moose tracks, and almost instantly, straight ahead, I saw a cow moose with ears up looking at us. We froze instantly. The eyesight of moose is not very good, and this cow was simply inquisitive. Then, while standing still, I chanced to see a branch of white wood, all bruised on one side about seven feet above the ground—the sure sign of a

bull. I motioned to Sandy, then crouched down out of sight and sneaked to the right around a big fallen tree, following the tracks. Arriving at the other side of the tree, I instantly saw four big black spots, but not a horn could I see to tell me whether they were bulls or cows. So I moved around a little. Two of these black spots saw me and started to move off, and in each case I caught a glimpse of big-palmed antlers, but no chance for a shot. One black spot remained in sight a little longer. Sandy whispered that he saw horns and wanted me to shoot, but I refused to without knowing that the head was a big one. Then this bull, too, moved off. None of them were really alarmed. In fact, I think they moved off simply in deference to the old cow, who was rather anxious and dubious. They were in no hurry, and we followed them, catching glimpses of them now and then. Finally they decided that they did not like our hanging along in the rear, and started off at a fast walk, which soon put them way beyond hopes of our overtaking them. These moose were not alarmed—they were just suspicious. A scared moose rushes through the woods like a steam engine, knocking down everything in his way, breaking down trees 3 or 4 inches in diameter and cutting a swathe through the forest for a mile or more that is as plain as a tote road.

Why did I not shoot at one of these bulls? Simply because it was impossible to get in a sure shot. It is difficult for a rifleman who has never hunted in the woods of eastern Canada to appreciate the conditions. Imagine three or four picket fences between the firing point and the rather indistinct moving target—a target which has no visible bull, but a certain spot just the same that must be struck to ring up the white disk. Here and there, perhaps, there is a picket out of one of the fences and there is your only chance. If your game does not pass by this open place at a time when you can squeeze off your shot, you are out of luck, for the chances are ten to one you will connect with a tree instead of the moose or deer. Examine the second photograph herewith and imagine shooting at an object moving through those woods 100 yards off, and you will perhaps begin to realize that it is a little different from your imagination.

Well, we left the tracks of these moose and started off up wind once more. Half a mile further on we again saw a black spot, and again we both froze in our tracks. This, too, was a cow. A little monkeying and peering around, and then, strange to say, for the second time we counted, one by one, four more black spots—five moose in sight at one time. But this time, thanks to a little balsam thicket, none of the moose had seen us. For a full ten minutes I watched, eyes straining and rifle ready; then one black spot moved slightly and I caught a glimpse of a big, finely palmed antler. There was just a little open space through which I could see a part of the moose. It looked as though it was probably the paunch and hindquarters, but there were



"Then we went forward to where my moose lay dead."

no other open places possible to shoot through, so I thought it best to take the shot on the chance that the bullet would drive through into the vitals, or cripple so that I could perhaps get in another shot. So I carefully pulled my shot as near to what I thought was the front end of the moose as I dared without running risk of hitting a big spruce. At the shot all the moose started to move off, going rather leisurely, however. Evidently they thought that the shot was a tree falling or something of the sort. Even the bull I fired at did not seem to be in a big hurry. I think that the bullet did not hurt him half as much as the vicious jabs he got daily from the horns of other bulls in fighting. Fights between bulls are a daily occurrence even after the rutting season has stopped, and until they shed their antlers. In this case the rutting season had been over for a month and a half.

We went up to where the bull had stood when I fired at him, and there was a big splash of blood and lots of hair. About the worst mistake a tenderfoot can make is to follow a wounded animal too quickly. Let them have plenty of time to lie down and stiffen up. So I suggested to Sandy that a smoke would be pretty good, and it was an hour before we started on the trail. At first we got a little misled because a cow had carried some of the blood along on her hoof, and we followed her trail for a couple of hundred yards until it went between two trees too close together for a bull to get through, and we discovered our mistake and came back and had no trouble in getting on the bull's track again. He was bleeding pretty badly. From the track I was soon able to tell that the blood was flowing down his right hind leg. Evidently we were in for a long chase. The track did not show any limp, and there was too much blood for simply a leg shot. By referring back in my memory to the appearance of the bull when I fired, I realized that I had evidently struck him in the flank and the bullet had prob-

ably penetrated into the intestines. This reasoning proved to be correct afterwards. As in target shooting, so also in hunting, it pays to be cool when firing and to call your shot accurately.

On and on we went on that trail, I leading and Sandy following, ready to fire instantly in case we jumped the moose from his bed. The bull apparently was heading for the very summit of one of the highest of the Black Peaks. Thus we went for about three miles. Jumped a little doe which hung around right in front of us and delayed us for ten or fifteen minutes because we dared not go forward and frighten her and have her rush off and perhaps alarm the moose. Finally she trotted off and again we started on the trail. Almost instantly I caught sight of another black spot, then three moose! Gosh, what a game country! We could see the one on the left was a cow. No horns visible. Five minutes waiting, then one of the black spots moved and I saw an antler that looked exactly like the one my moose had carried. In another minute he moved slightly so I could get a glimpse of his outline and knew that the black portion I saw was the point of his chest. Again I pulled off easily, and instantly I saw all four hoofs of that moose at least twelve feet up in the air. The bullet seemed to lift him clear off his feet and hurl him upside-down into the air. The other three moose ran off. We saw that two of them were fair sized bulls. Then we went forward to where my moose lay dead. Fortunately it was the one that I had first shot at. The first shot had struck as already related; and the second shot, striking right in the point of the chest, had evidently ranged back through the heart. He was the blackest, chunkiest, glossiest moose I have ever seen, in fine condition, with a splendid well-palmed and regular head. Photographing, skinning, and butchering were again in order, and then came the heart-breaking work of packing a moose head through a rough

(Continued on page 9)

A Practical Small-Bore Course

By E. NEWITT

HAVING on many occasions taken the liberty of throwing "brickbats" at courses, instruction methods, and the other names by which the endless variations of bull's-eye shooting are known, I venture to place myself at the mercy of the critics by offering my own ideas of a practical course.

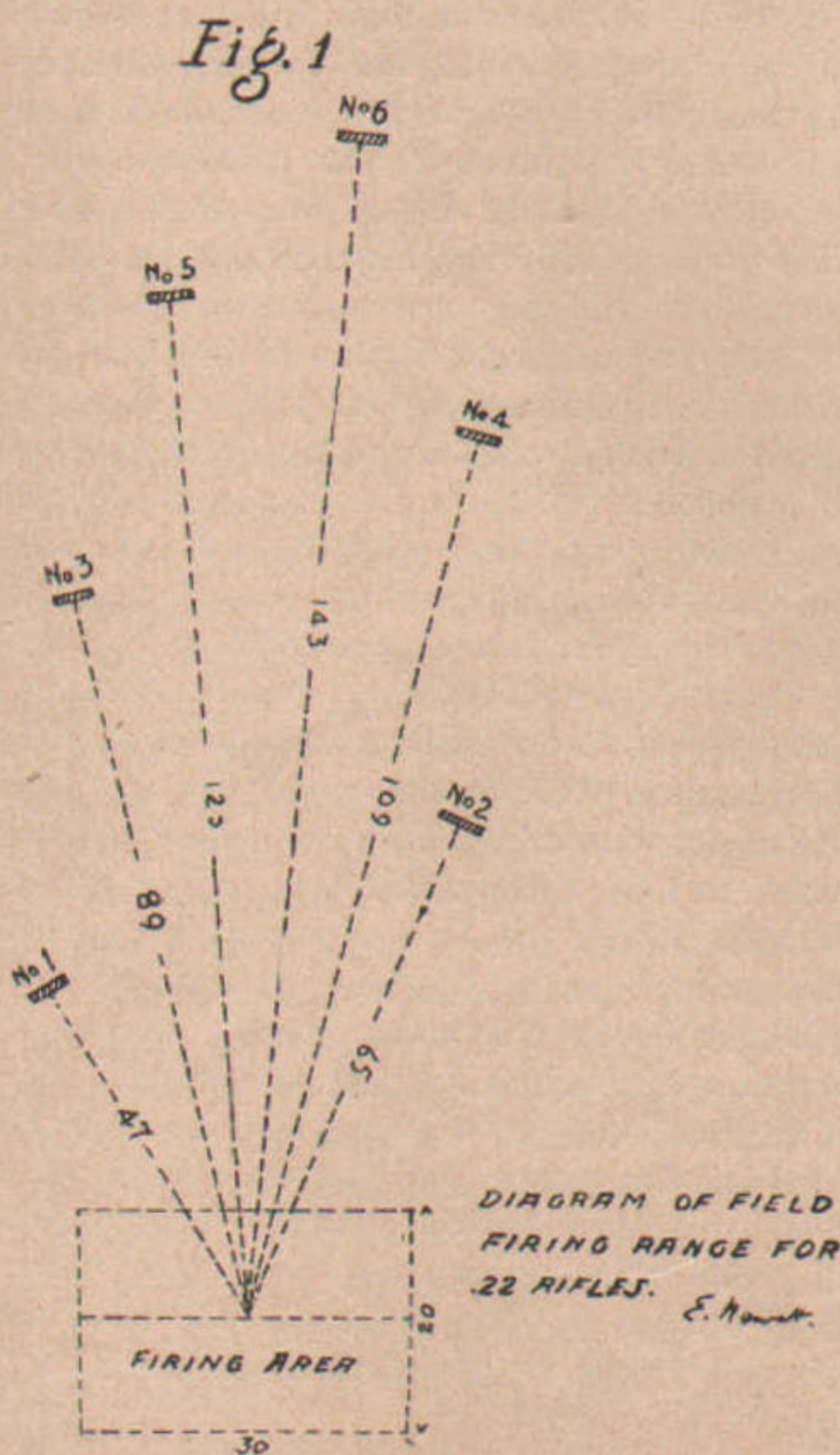
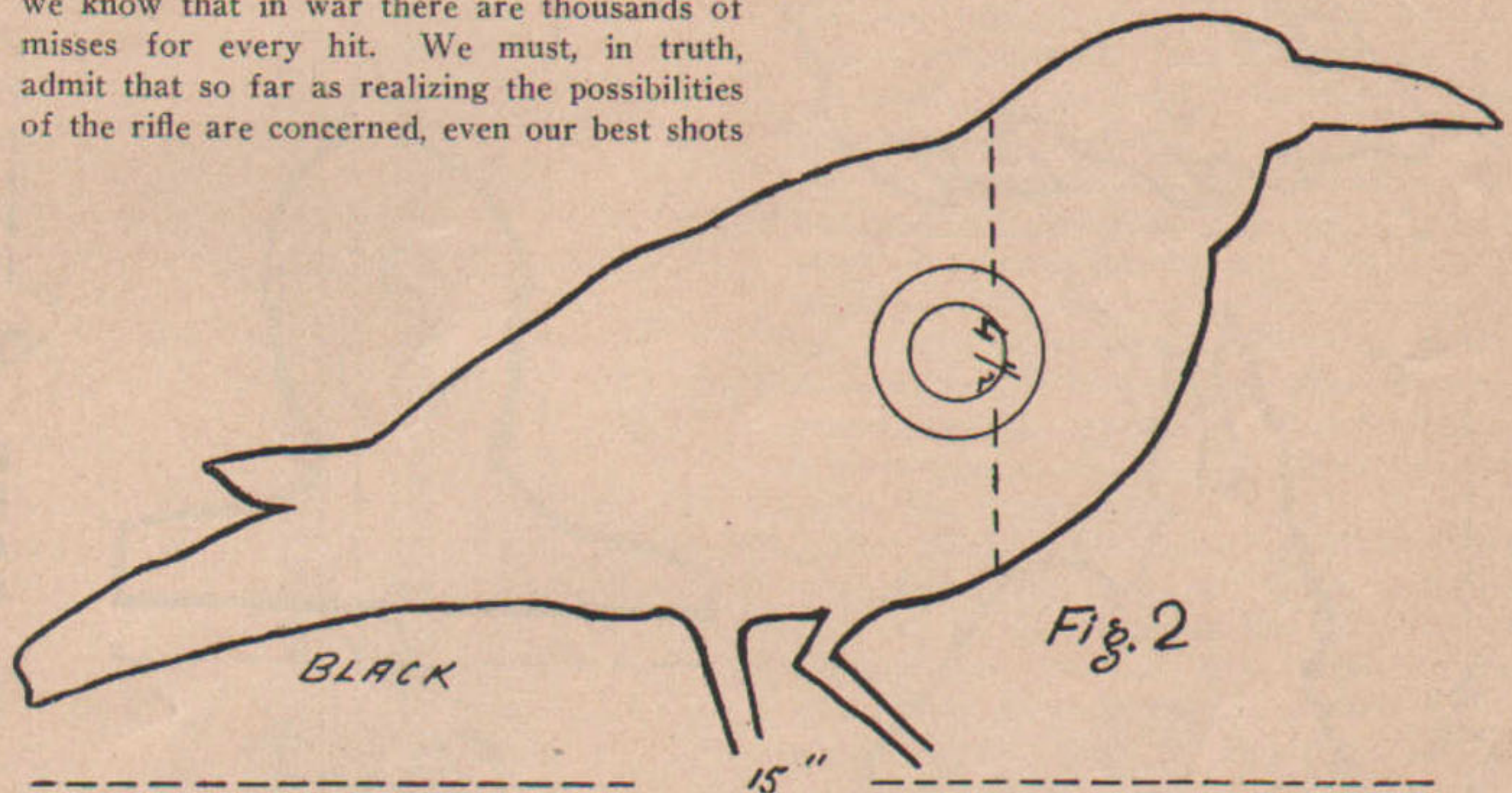
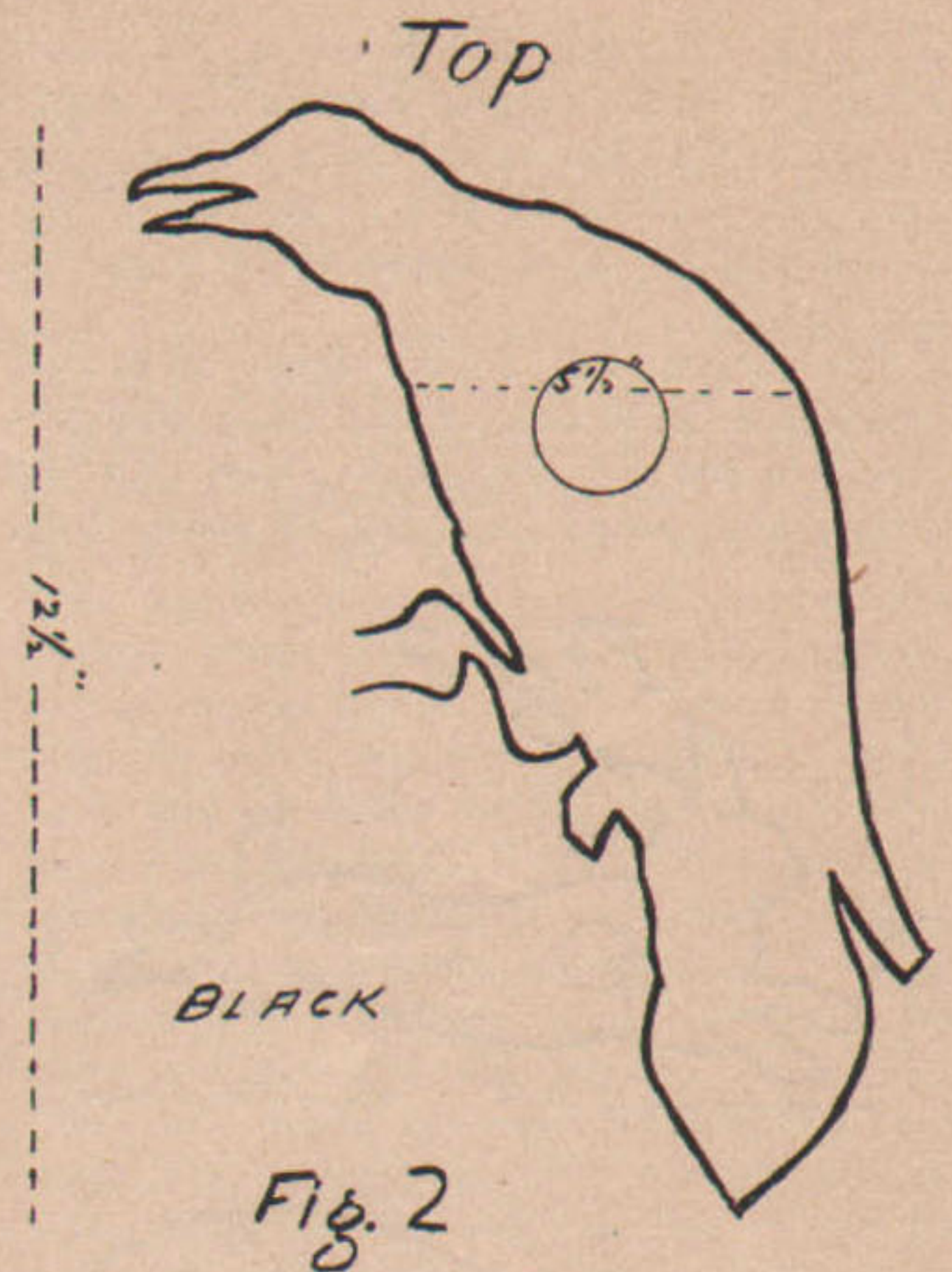
Bull's-eye shooting is a means to an end, and the end is ability to hit natural objects under natural conditions as they are presented in hunting and war. At present we confine our instruction, practice and qualification tests to shooting at bull's-eyes beautifully silhouetted against a white background, which also serves the purpose of silhouetting the sights, rendering aiming unnaturally easy; distances are fixed at points for which there are corresponding elevation marks on the rear sight, and a target tender renders additional help by indicating the position of the hits, thus assisting us to adjust for elevation or wind allowance errors.

Such conditions, hallowed by tradition and antiquity and ideal as a kindergarten course for developing the aiming and holding faculties, or testing ammunition, savor of the days when the bow reigned supreme; indeed, none of the underlying principles and but few of the minor details have been altered in ten centuries. In the meantime, the power and range of firearms has increased; animals and men, educated to their possibilities, take refuge in distance, camouflage and behind protective cover, every condition, in fact,

under which a man or an animal presents itself as a target has drastically changed.

Having acquired a certain amount of proficiency under these antique archery conditions, we invest ourselves with medals and grandiloquent titles, and imagine ourselves the whole show. When we go hunting or to war, disillusionment comes, not, perhaps, so convincingly as it ought, because in hunting it is so easy to find a plausible excuse, and in war we rarely know whether we hit or miss; moreover, both come so seldom in a lifetime as to fail to impress us.

Any respectable modern rifle is capable *per se* of hitting a man or an animal as far as it can be seen, and the essentials to hitting are not beyond human ability, yet there are few hunters who can make sure of a hit at 200 yards, and none at 500 yards, while we know that in war there are thousands of misses for every hit. We must, in truth, admit that so far as realizing the possibilities of the rifle are concerned, even our best shots



are failures, and but a trifle better than the others. As both are the product of our thousand-year-old system, the inevitable conclusion is that the system is at fault.

It is for this reason one advocates a change. Progress without change is impossible; after ample trial we know what to expect from our system. In any case the results are not so good that we need hesitate to try a change. Let us remove as many artificialities as possible from our rifle ranges and simulate in our targets and shooting methods as closely as possible the conditions we encounter when we use the rifle with intent to kill.

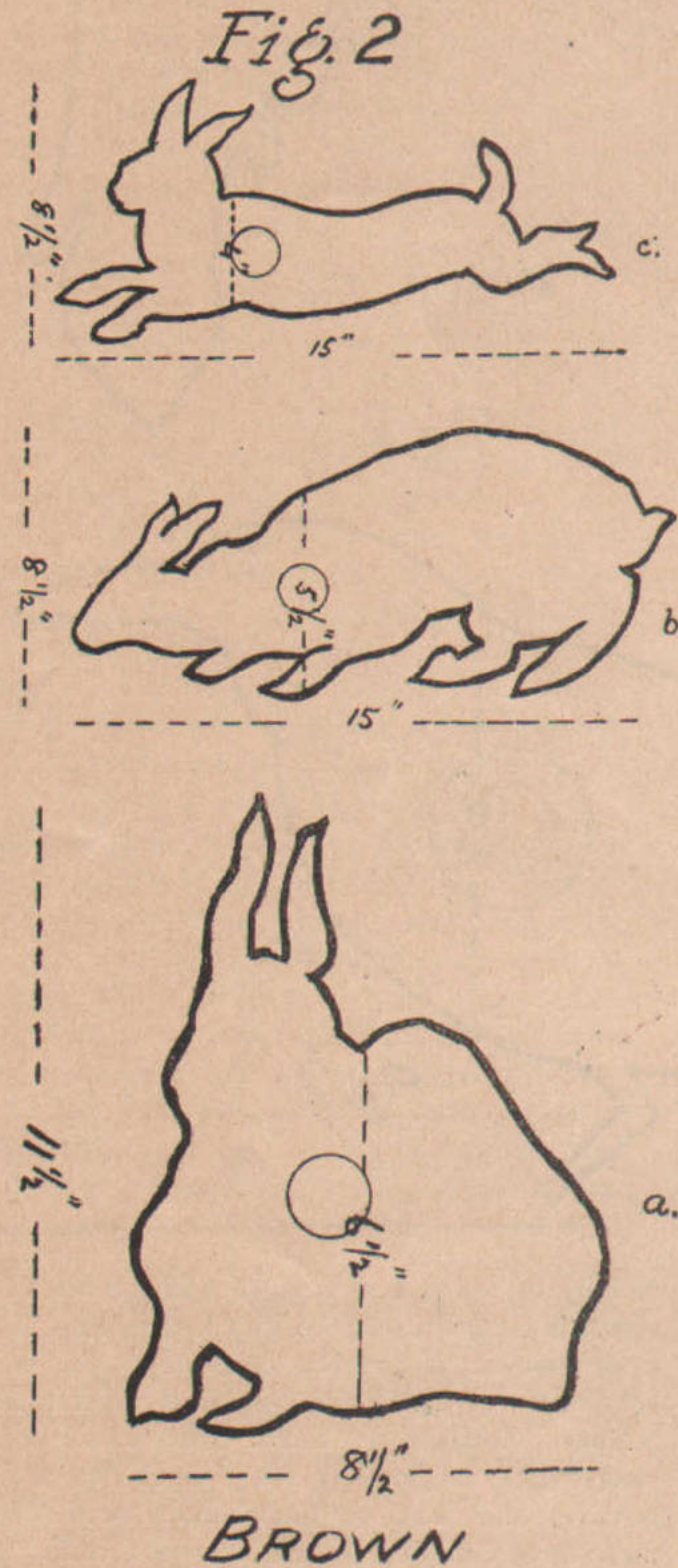
While my suggestions, by multiplying the distances, might equally apply to military rifles, I have adapted them to the smallbore, by which I mean the .22, for the reason that I believe the .22 to be the best possible instruction and practice medium under all circumstances. Its energy is low, and its bullet easily stopped, while its trajectory curve is considerable, and demands much the same exactitude in elevation for the targets and distances prescribed as a more powerful rifle at longer ranges. Ground suitable for .22 ranges may generally be found in the near

vicinity of towns and villages, and the ammunition is comparatively so inexpensive that the large amount of practice essential to the development of the really practical marksman becomes possible at small cost; moreover, ranges and targets are very much less expensive, and may be much more accessible than those suitable to the use of a military rifle.

An ideal range for my system will be a fairly level tract about 200 yards long and 50 yards broad, and if bounded at one end by sharply rising ground, so much the better. At one end a space about 30 yards wide and 20 yards deep, commanding a view of the whole ground, will be set apart for the firing points, the exact position of which will be varied from time to time within the limits of the firing area in the same manner as the position of the hole is varied on a golf green. Measuring from an imaginary line drawn through the center of the firing area, throw up six turf or earth mounds 4 feet wide, 4 feet high, and about 2 feet thick, to serve as stop butts, one each at the following distances: No. 1 at 47 yards, No. 2 at 65 yards, No. 3 at 89 yards, No. 4 at 109 yards,

No. 5 at 123 yards and No. 6 at 143 yards. Place No. 6, the longest-distance butt, about 10 feet to the right of the center of the firing area, No. 5 about 10 feet to the left of the center, and so on, as shown in the diagram, Fig. 1.

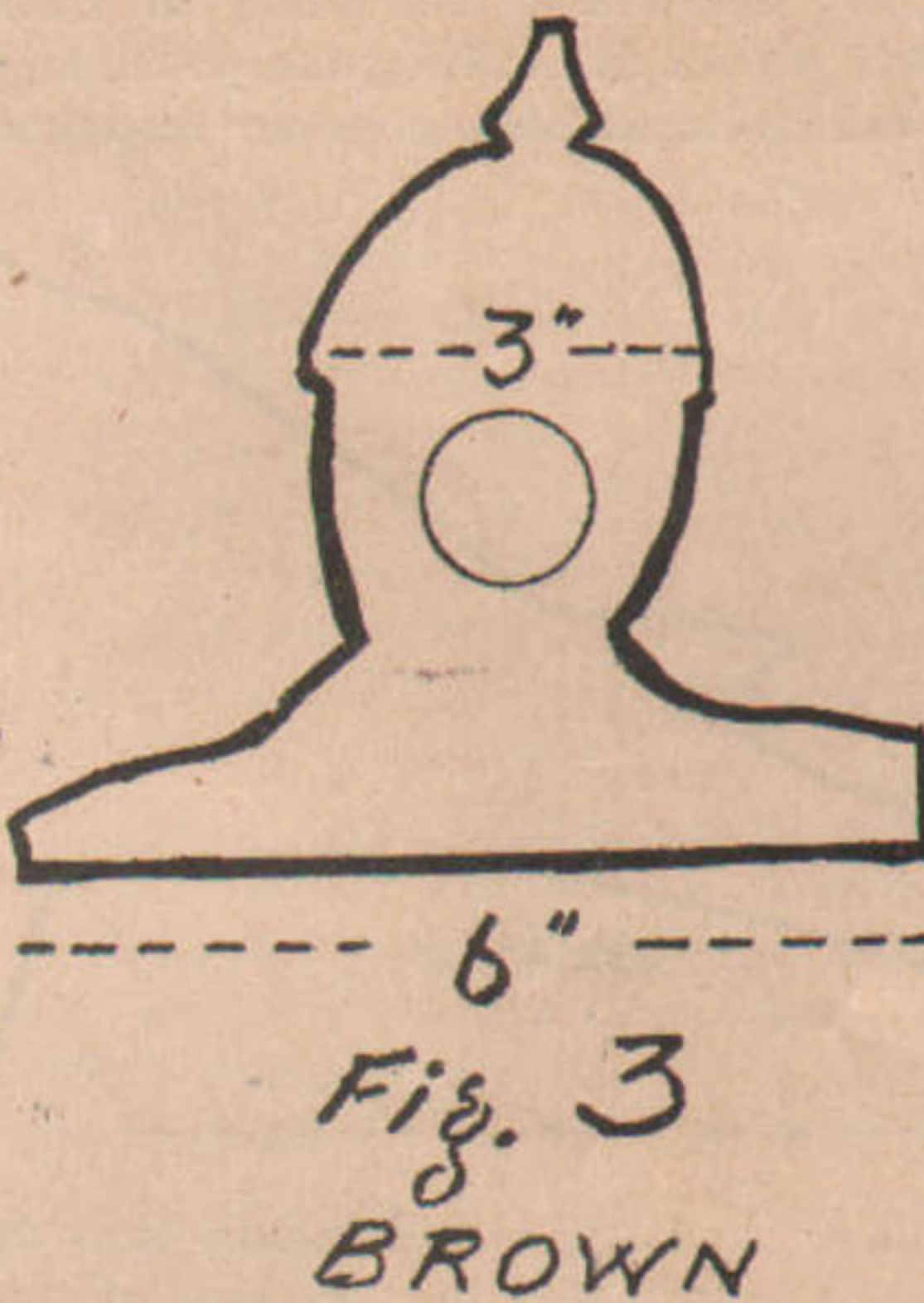
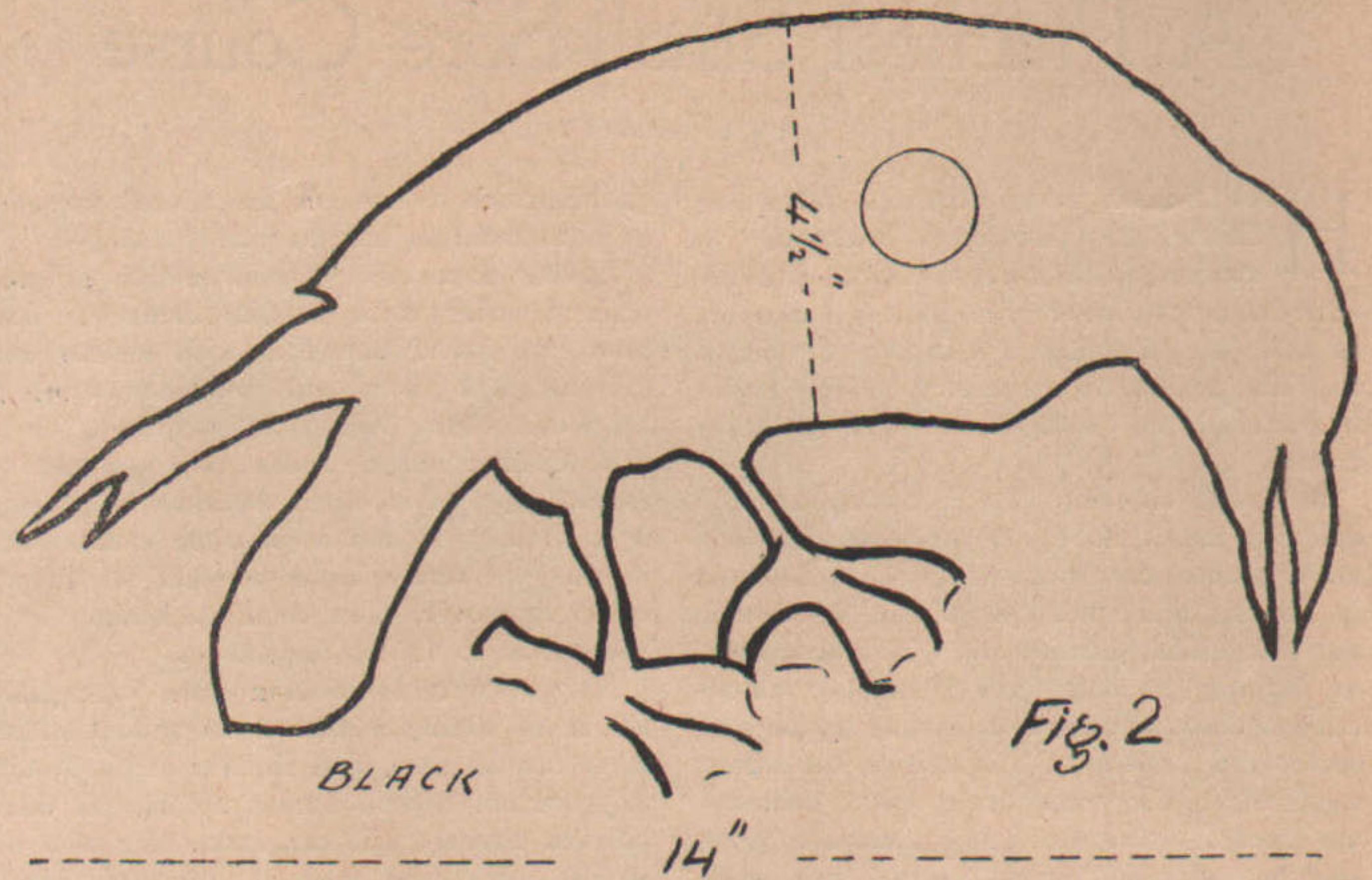
The targets will be cut from cardboard, pasteboard, millboard, or any fairly stiff material, brown for the rabbits, black for the crows, and tacked to a peg 12 inches long,



1 inch wide and about a quarter of an inch thick, and each target will have a ring 2 inches in diameter drawn about the region of the heart. This ring will not be colored inside and should be quite invisible from the firing area. Diagram, Fig. 2, gives the shapes and dimensions.

After each firing, the targets will be patched with brown or black paper, as the case may be, and each will last for about 1,000 shots. Hits within the ring count two points, on the remainder of the target one point. Now for the qualification course.

First Exercise. Grouping.—Place two ordinary 50-yard bull's-eye targets in front of the nearest butt and fire ten shots slow fire at one and ten shots in ninety seconds at the other, without marking or spotting or sighting shots. The qualifying score is 80 per cent



of the highest possible score for the slow fire and 70 per cent for the rapid fire. Time will run from the word "Commence," and rifles and magazines must not be loaded until the word "Commence" is given. Either item of this exercise may be repeated until the qualifying score is reached, but the shooter may not proceed to exercise 2 until he has attained the qualification in exercise 1.

Second Exercise.—One figure target having been placed opposite and quite close to each butt, the shooter will fire five shots at each, thirty shots in all, slow. He may adjust his sights, but must not move from the position at which he started on the first target, and there must be no marking or spotting. The H. P. S. is 60 points and the qualifying score 20, while each target must be hit at least once.

Third Exercise.—Repeat the foregoing practice exercise 2, but with a time limit of five minutes. Qualifying score, 20 points, and each target must be hit at least once. The shooter will not be permitted to proceed to exercise 3 until he has qualified in exercise 2, but he may repeat each of the first two exer-

cises until he obtains the qualifying score. Shooters, after obtaining the foregoing qualifying scores, will be rated P. M., or Practical Marksmen.

For E. P. M., or Expert Practical Marksman rating, repeat the foregoing three exercises and add:

Fourth Exercise.—Starting about 100 yards in rear, run to the firing point, fire one shot at each of the figures and run back to the starting point. Time allowed, two minutes. Qualifying score, each target must be hit.

For the E. P. M. rating, failure to qualify in any exercise will invalidate all the preceding exercises, and the whole course must be shot again.

It will be observed that this course simulates in targets, time and varying distances, all the conditions that are found in hunting, and many that occur in war. The time limit will often preclude the adjustment of elevation for the different distances at which the targets are placed, and also calls for rapid loading and aiming. Severe as this test may seem, and difficult as it will undoubtedly prove until prolonged practice has endowed the shooter with the necessary speed and judgment, those that pass the test will have the satisfaction of feeling that they really are what their rating implies.

In addition to individual qualification, it is very desirable to include collective or team qualification for rifle clubs and military units. By this means competition between clubs and units can be encouraged, and the cracks induced to help the less expert in order that their club may qualify the most teams.

As collective shooting rarely occurs in hunting, the conditions should simulate some war problem. Three head-and-shoulder figures of the shape and dimensions given in Fig. 3 should be placed opposite butts Nos. 2, 4 and 5, that is, nine figures in all. Teams will consist of six men, and no man may shoot in more than one team in one club or unit.

(Concluded on page 9)

The Deadly Parallel

By MAJ. S. J. FORT

THE Colt automatic pistol, calibre .45, has certain structural peculiarities which deserve consideration, in that they are factors of some importance in their effect upon dispersion of hits. The illustrations show diagrammatically the grasp of the handle, which is one of the factors in question and the main one to be discussed.

No. 1 shows the pistol handle placed in the palm of the hand preliminary to grasping it. Note particularly where the heel of the handle rests against the heel of the palm, and that the forefinger is pushed too far through the trigger guard.

No. 2 shows the handle centered in the crotch between the thumb and forefinger, while No. 3 shows the hand, arm and pistol in the firing position, with one line drawn through the bore of the barrel, one directly through the center of the trigger, the third passing through the sights, each line prolonged fore and aft to show their relation to the grasping hand and the aiming eye.

Theoretically and disregarding lateral deviations, if the relation between these lines is maintained while firing, the point of aim will be hit, but while the relation between the lines drawn through the bore and trigger is fixed and constant, as will be seen later, the correlation of the line of sight and the other two lines may be disturbed by various causes.

If the muzzle is raised or lowered, for instance, the angle between the line of sight and that drawn through the bore is widened or narrowed, as the case may be, with a corresponding change in the location of the hit.

The pistol being a one-hand weapon, cannot be held as immovably as the rifle, and anything which tends to increase its mobility tends to increase dispersion of hits.

An improper grasp of the pistol handle is a contributory factor in this respect, for the more force exerted by muscular contraction of the hand the more the muzzle of the pistol, and, in fact, the whole weapon, wavers.

Not only does a forcible grasp of the handle cause muscular tremors of the whole arm, but as the force of contraction exerted by the three last fingers of the hand is increased, the heel of the pistol handle is brought more forcibly into contact with the heel of the palm, and the latter point, acting as a fulcrum, the pressure tends to bring the muzzle lower and lower as it is increased, until the front sight may be entirely lost out of the rear-sight notch.

The starting point of the grasp is proper centering of the handle in the crotch of the hand, the thumb and forefinger extended along the sides of the weapon and the beginner shown that it is quite possible to hold the pistol in this manner by simply pinching it between the two digits. The second part of the grasp is simply *wrapping* the three last fingers around the handle as an additional support, with a minimum of pressure or contraction.

Those who are unfamiliar with the .45 automatic bring with them to the firing line an altogether wrong impression of its recoil and in a line-up of fifty men, a large number of them will be found squeezing the handle of their pistol to a fare-you-well, making hard work out of what is a very simple procedure.

Centering the pistol handle in the crotch of the hand serves other purposes besides that already mentioned. With the average hand, when the handle is thus centered, the forefinger naturally finds its proper relation to the trigger. Unless this digit is over length, the hollow part of the tip just beyond the first joint rests directly on the center of the trigger, and when pressure is

applied it is practically in a straight line backward.

Furthermore, just so long as the three last fingers do not exert undue pressure upon the handle, the forefinger is permitted to squeeze back against the *upper part of the crotch of the hand as a fulcrum*, thus maintaining the required relation between the parallel lines shown in the illustration 3.

Mechanically speaking, it is impossible for the trigger to move back against the sear except in a line parallel to the bore, but it is quite possible to exert pressure upon it in a manner which tends to deviate the muzzle. Unless the tip of the finger is placed exactly over the center of the trigger, there is bound to be more pressure exerted on one side than the other, and while it may be possible to counteract this inequality by a slight change in the grip, it is only accomplished by continual practice, through which the hand becomes accustomed to the position.

For this reason, after the beginner has been taught the proper grasp and it becomes automatic in its nature, there is less danger of the fault making its appearance, while it is extremely difficult to overcome an habitual grasp which is faulty from the start.

Experience at the Small Arms Firing School showed in the beginning of training that a majority of the students, when shooting with deliberate aim, got their hits below a horizontal line drawn through and to the left of the bull, largely due to imperfect centering of the handle in the crotch, with more of the finger resting upon the trigger than was necessary, and as instruction progressed and practice continued, the hits approached the center line of the target.

Hits above the horizontal line mentioned were due for the most part either to a sudden jerk of the trigger as the last ounce of pressure was given, or to a sudden relaxation of the tense grip at the instant of discharge, which tipped the muzzle up just as the bullet left the barrel.

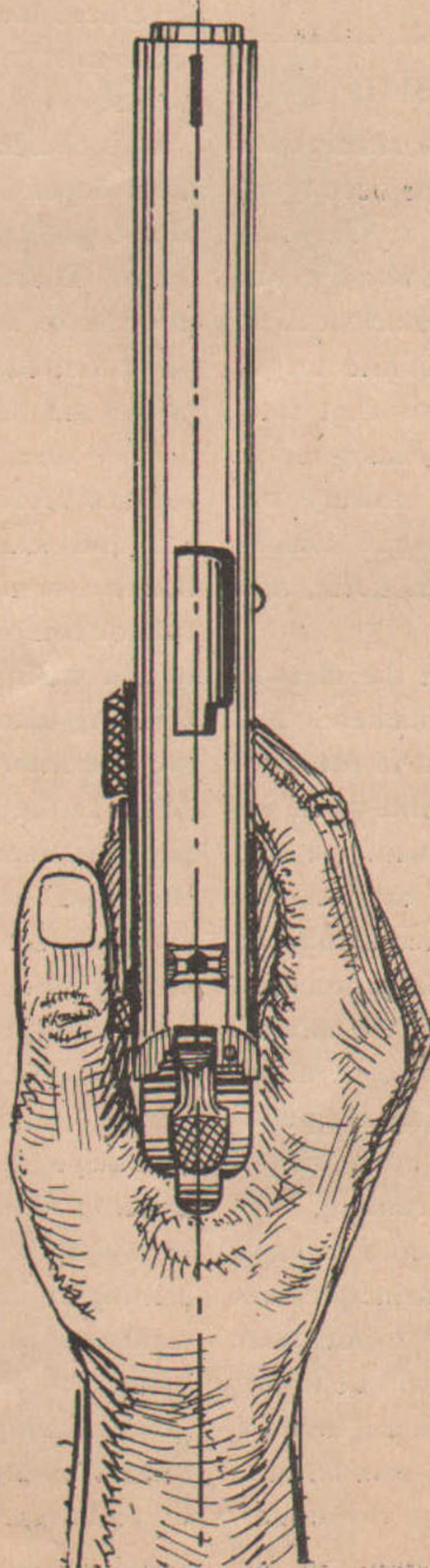
The relation of the parallel lines as applied to the .45 automatic and similar lines applied to the .45 revolver with a perpendicular line dropped from one to the other, shows plainly why the revolver is likely to group its hits high, and the automatic to group low, considering the shape and rake of each handle as the factor involved.

Note the narrow corner of the automatic handle impinging upon the heel of the palm, and the fullness of the same part of the revolver handle.

When the handle of the automatic is grasped as suggested, the tendency is for the muzzle to fall below the line of sight, and the wrist is called upon to raise or lower it, as the case may be, to align the sights with the point of aim. The revolver handle, on the contrary, fills the hand better, and the weapon comes into alignment with comparatively little movement of the wrist. This difference is further demonstrated when shooting from the hip.

It will be a revelation to those who attempt this feat for the first time to discover that the muzzle points so low, when apparently

(Concluded on page 9)



Cut No. 2—The grip centered in crotch of hand.

ARMS AND THE MAN

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SEMI-MONTHLY—ON THE 1st AND 15th DAY

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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 a 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.

"NAIL-DRIVING" MARKSMANSHIP

METHODS of training the tyro in marksmanship is a matter which to a greater or less extent is occupying the attention of most thinking riflemen at the present time. As a result, two distinct schools of thought on this subject are now evident. One group of marksmen is prone closely to adhere to the old black-and-white target bull's-eye at known distances as the only basis that they will recognize for training courses. The other has gone to the opposite extreme of seeking to discard entirely the paper rectangle and to substitute therefor what usually amounts to snap shooting on camouflage, silhouette, and moving targets of various special types.

Neither the one nor the other is likely to be the method approved in the future for the making of marksmen. The charge that—except for a few thousand dyed-in-the-wool rifle cranks—bull's-eye shooting on the black-and-white inanimate paper, with careful corrections for windage and elevation, over meticulously surveyed ranges, carries with it the handicap of deadly monotony, cannot successfully be controverted; but admitting the truth of this allegation does not necessarily imply that the only escape from the monotony of bull's-eye shooting at fixed distances is to be found in courses based exclusively upon snap shooting at special targets. While bull's-eye shooting is based upon only a cut-and-dried method, it involves scientific training. On the other hand, snap shooting is apt to develop a class of marksmen who know less about the scientific principles underlying the placing of shots than is desirable. Somewhere between these two extremes the best methods will be found.

Nor can we look to field firing and negative angle theories for the maintenance of our marksmanship standards in the future. These practices do not appeal to the understanding—one might almost say to the religion—of the American. As a nation we believe in what might be termed "nail-driving marksmanship." Our history is wrapped up

in the ability of our riflemen. The young boy is feasted on tales—more or less exaggerations—of the shooting of our forebears; "nail driving" and "squirrel barking." It is a congenital trait that our riflemen cannot aim anywhere except at the spot they want to hit. Even the battle-sight theory evolved by the army has never for a moment appealed to them; and now that the war has ended and there has been time for our officers to reach conclusions as the result of actual observations of Americans participating in modern warfare, we find that the men who have had extended experience with troops in action in the war with Germany are unanimous in declaring that we must modify the belief that men under fire cannot be depended upon carefully to estimate distance, adjust sights, and to take deliberate aim. Such officers are authority for the statement that raw troops begin to estimate distance, set sights, and take careful aim in their first engagement after they have been under fire for fifteen or twenty minutes; that the hit-or-miss method never returns in subsequent engagements.

It is becoming more increasingly evident that the nation must depend upon agencies outside of the army for much of the pre-draft training which our future armies must receive. Therefore pre-draft training must be made popular, in order to interest the citizen. If it is to succeed, it must be presented to the American as an attractive sport. This means that while "nail-driving" marksmanship must underlie any future training methods, the details of instruction courses must be made attractive by the addition of rapid fire and snap shooting programs, with camouflage, silhouette, or moving targets. Just as the average American cannot comprehend the doctrine or the negative angle, and in the main unhesitatingly condemns it, so the average thinking men or youths who are not congenital "gun boys" are not interested by the monotonous bull's-eye except in so far as they realize that practice upon the black-and-white paper is necessary in learning to shoot, or in determining the capabilities of some particular rifle. After bull's-eye shooting, something more interesting and capable of greater variety is demanded; something which parallels the more practical shooting of hunting or of the battlefield. This also exactly coincides with the military viewpoint; that is, that the soldier must be thoroughly and basically trained on bull's-eye targets at known distances. When this basic training has been accomplished, but not before, the soldier is taught to fire accurately at targets more nearly representing an enemy in appearance, and finally the elements of time and movement on such targets are introduced, all this being an introduction to collective musketry. But the modern army officer is also careful to state that there must always be a periodical return to bull's-eye shooting to keep up real accuracy and technique. In other words, a man can never become a practical shot who does not start on the bull's-eye, progress to practical targets, and then combine the two to keep in shape.

The problem presents many varied sides. Not only has the never-varying bull's-eye retarded the spread of the doctrine of straight shooting among others than those naturally inclined to a love of target marksmanship, but the very fact that all ranges have been built with the one idea of only accommodating shooting at paper targets from known distances, has proved a potent drawback. Upon such ranges it is difficult to install any of the types of targets which permit of shooting variety, and if the ranges permitted their installation it is practically impossible to obtain special target equipment unless it is made by hand. For instance, there seems to be on the market no really efficient disappearing target, which falls when hit, and which can be returned to an upright position from the firing point.

In brief, when an attempt is made to combine the basic principles of bull's-eye shooting with that which may be called "practical" shooting, it is at once apparent that there are two marked handicaps: first, there is no standard equipment which can be obtained to fit ranges for practical shooting; second, practical shooting has never been standardized to permit of a comparison of scores at different ranges or to form the basis of mail matches between different clubs.

Undoubtedly those to whom will fall the task of outlining future methods for training in marksmanship will find the ways and the means of reconciling the two extremes, so that advantage can be taken of the best points of the bull's-eye and the practical systems; but until this is done the future of our national school as shooters will not be assured.

The Deadly Parallel

(Concluded from page 7)

it is directly in line with the target, the bullets striking in the ground anywhere from 20 to 3 feet from the lower edge.

When the muzzle is finally directed correctly, it sticks up like a sore thumb, and apparently every hit ought to go over the target instead of striking as they do in its body.

The revolver fired from the hip does not require the same degree of this apparently absurd upward cant to get the hits in the



Cut No. 1—Shows the pistol in hand preliminary to grasping it.

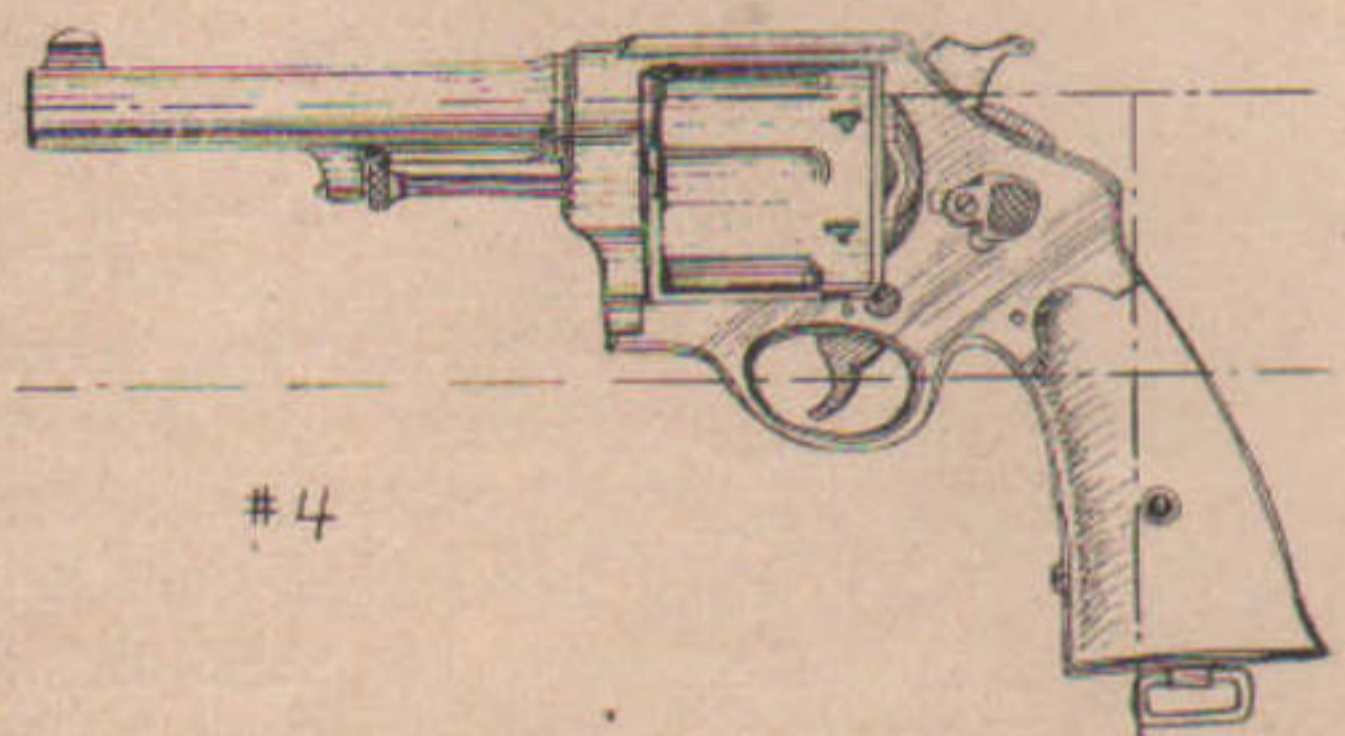
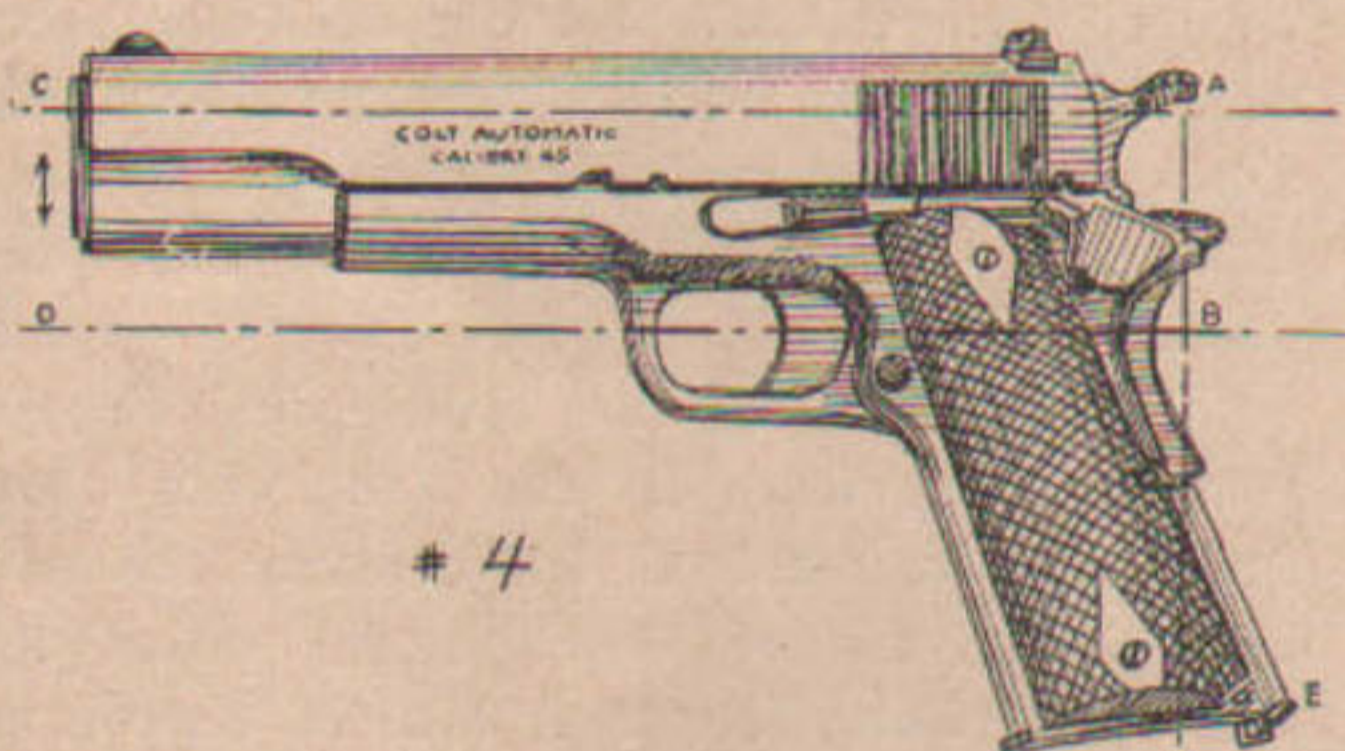
The First Tracking Snow

(Continued from page 4)

country. Try it sometime, if you want a man-sized job. The head of a big bull moose weighs between 125 and 175 pounds, and it is so shaped that it can only be carried conveniently on one shoulder. Also it catches in every tree and bush along the way.

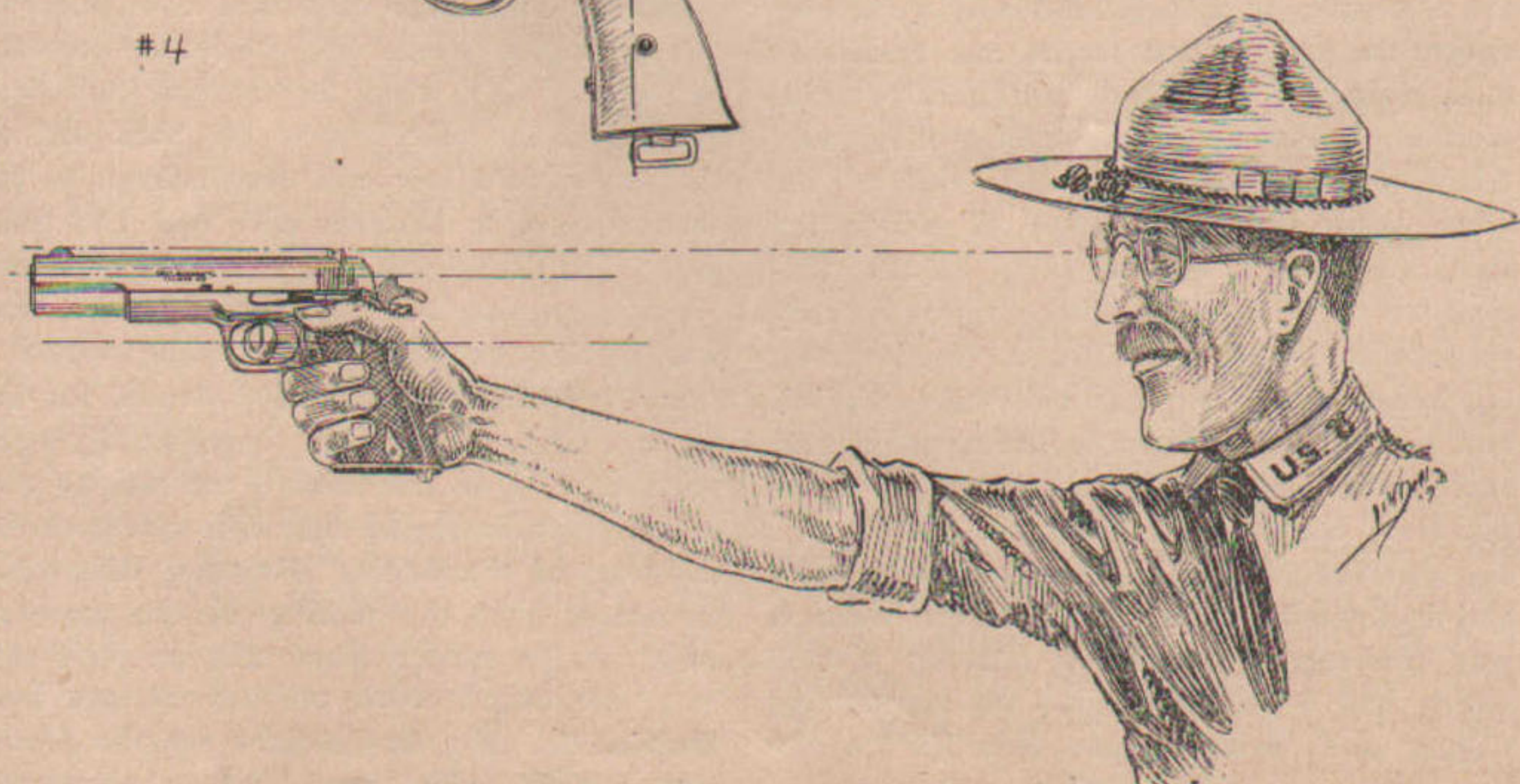
Neither of us had had a bite to eat since an hour before sunrise, so after about two hours of hard packing, we stopped beside a little pond and "b'iled the kettle." Fresh bannocks, venison steak, and hot tea gave us stomach for more. Finally we got to the place where we had parted from Honeycutt and Charlie, and the snow told us that they had not returned yet. A little further on and suddenly we heard a loud bull moose grunt behind us, and looking back saw them coming on in an awful hurry—snow flying in clouds off the bushes. They had . . . but that's Honeycutt's story which he will tell in the next number, and believe me, it will be well worth reading for all lovers of the grooved barrel and the open places.

[The second part of this story will appear in the coming issue, out on January 15.]



target, and, moreover, centering the revolver handle in the crotch of the hand comes more naturally than it does with the automatic. In other respects, all that has been said in regard to the automatic is equally applicable to the revolver.

As a matter of fact, all that has been written applies to any type of hand gun, and if the beginner will keep a mental picture before him of illustration 3, after learning how to grasp his weapon, I feel sure his progress will be more rapid and his groups of hits gradually become close enough to satisfy the most fastidious.



Cut No. 3—Showing hand and arm in firing position.

A Practical Small-Bore Course

(Concluded from page 6)

Each team will shoot for two minutes at each butt, with an interval of thirty seconds between butts. Rifles or magazines must not be loaded until the word "Commence," from which time will commence to run, and as many shots as the men are able may be fired in the time. Hits will count 1 point each, 10 points will be deducted for each target that is not hit at all, and 2 points for every shot fired after the time limit has elapsed. The qualifying score for a Class A certificate is 150 hits and for Class B 100 hits. Each team may have a coach or captain, who may use a telescope and direct the fire. Any .22 rifle with any sights may be used in any position.

Small-Bore Shooting in England

(Part V)

By HENRY WALTER FRY

THE final improvement which was made to the range of the Southfields Rifle Club was the covering in of the whole length of the firing point by a wooden structure which was connected to the pavilion behind in such a way that on wet days we could step down from the veranda and do our shooting at any of the three ranges without any inconvenience or discomfort from the weather, as the new shelter was closed in at each end and also at the back at that part of it which extended beyond the side of the pavilion. Now, although in England we do not get the intense cold that is quite the usual thing in the Northern States, and only have a really hard winter about once in every twenty-five years or so, yet in the late autumn, winter and early spring there are quite a lot of cold and wet days which make shooting in the open air anything but a pleasure, though, of course, the true rifle enthusiast will shoot in almost any weather. So, as may be imagined, the covering in of our firing point added very greatly to the attractions of the club and to the pleasure that we all took in our favorite pastime.

When the aperture sight first began to be used for smallbore target work, the only really good one we could obtain was the Lyman, which could be procured at any London gunsmith's at a very reasonable price, and the fact that in the tangs of our Stevens rifle stocks were seven holes spaced out for the Lyman sight bases was a further inducement to us to use it. And use it we did, and it served us well for some years, and the fact that at that time it was not fitted with a wind gauge did not trouble us, as the railway bank along the right-hand side protected us from wind. So when once a man had his sights properly lined up he had no need to alter them, as the drift of the .22 bullet is a negligible quantity at 100, which was our longest range. A few rifles had wing-gauge front sights, but most of us used plain bead, blade or barleycorn front sights, dovetailed into the barrel, which needed the tap of a hammer for lateral correction. It was at the Stanley Cycle Show in the year 1908, I think, that at the B. S. A. stand I was shown the first specimen of their wind-gauge aperture rear sight and instantly said that it was *the* sight for smallbore rifles, although it was not the first British sight of the kind. Greener had been making quite a good wind-gauge rear peep sight for his .22 Martinis, but it was not of convenient design and did not lie at all close to the stock when folded down. The L. S. A. sight, made by the London Small Arms Company, in which lateral correction was made by turning the sight disk, was one that did not much appeal to any of us, and I do not think it was very generally used. The new B. S. A. sight, when it came out,

found favor with us at once, but it is not my place to preach or advertise its virtues; it can do that very well itself and has done so on this side of the water as well as in the land of its inception. It was not till about the end of my shooting activities on the smallbore range that the B. S. A. .22 rifles began to be made and used by club riflemen. Their good qualities are well known in America and need no word from me.

Open rifle meetings have since the beginning of the movement been held every year in various parts of Great Britain by the Society of Miniature Rifle Clubs, lasting from two or three days to a week, and I attended several of them on the Southfields, Ham and Petersham, Hendon and Cricklewood and Maidenhead ranges. Competitions of various kinds, slow and rapid fire, squadded and unlimited, individual and team shoots were shot for at the three distances up to 100 yards, and competition was always very keen, so much so latterly that nothing less than a score of 98 or 99 stood any chance in the prize list. There was a general gathering of the clans, as it were, of crack shots from many clubs, who all knew one another, if not personally, by reputation, and a general spirit of good fellowship mingled with keen rivalry on the firing line was dominant throughout. They were always very enjoyable, especially if the weather was fine, and on the last day some prominent personage, usually a general or field marshal, would give away the prizes and make us a little complimentary speech. I remember one rather amazing incident at the end of one of the meetings on the Ham and Petersham range. Our club had taken first prize in what we called the Egg Competition, which is shot for in heats, usually, by teams of four men firing at 100 yards at 2-inch white earthenware disks hung by nails onto the black timber framework of the target butt. There are five disks to a team, and it is a race between the two to see which can break the most disks inside the time allowance of three minutes. Now, to hit so small a thing as a 2-inch white disk at 100 yards with a rifle when there is no indication of where the shots are going is no easy thing, as any rifleman will find out if he tries. It was a really spectacular shoot, and often a very exciting one when each team has only one disk left and concentrates its whole fire upon it, and succeeds in breaking it amid a roar of cheering from the crowd looking on. Well, as I say, our team had been through several heats and had finally come out victorious, when it was challenged to shoot a heat by a club which had been disqualified on account of trigger pulls being lighter than the regulation and was feeling rather sore about it. Nothing loth, our team, which was tuned up

to the last notch, accepted, and both teams lay down and got ready. The whistle blew, and the five disks opposite our men vanished in just eight seconds, while those of the others were untouched. Needless to say, no more challenges came from the team of discontented ones.

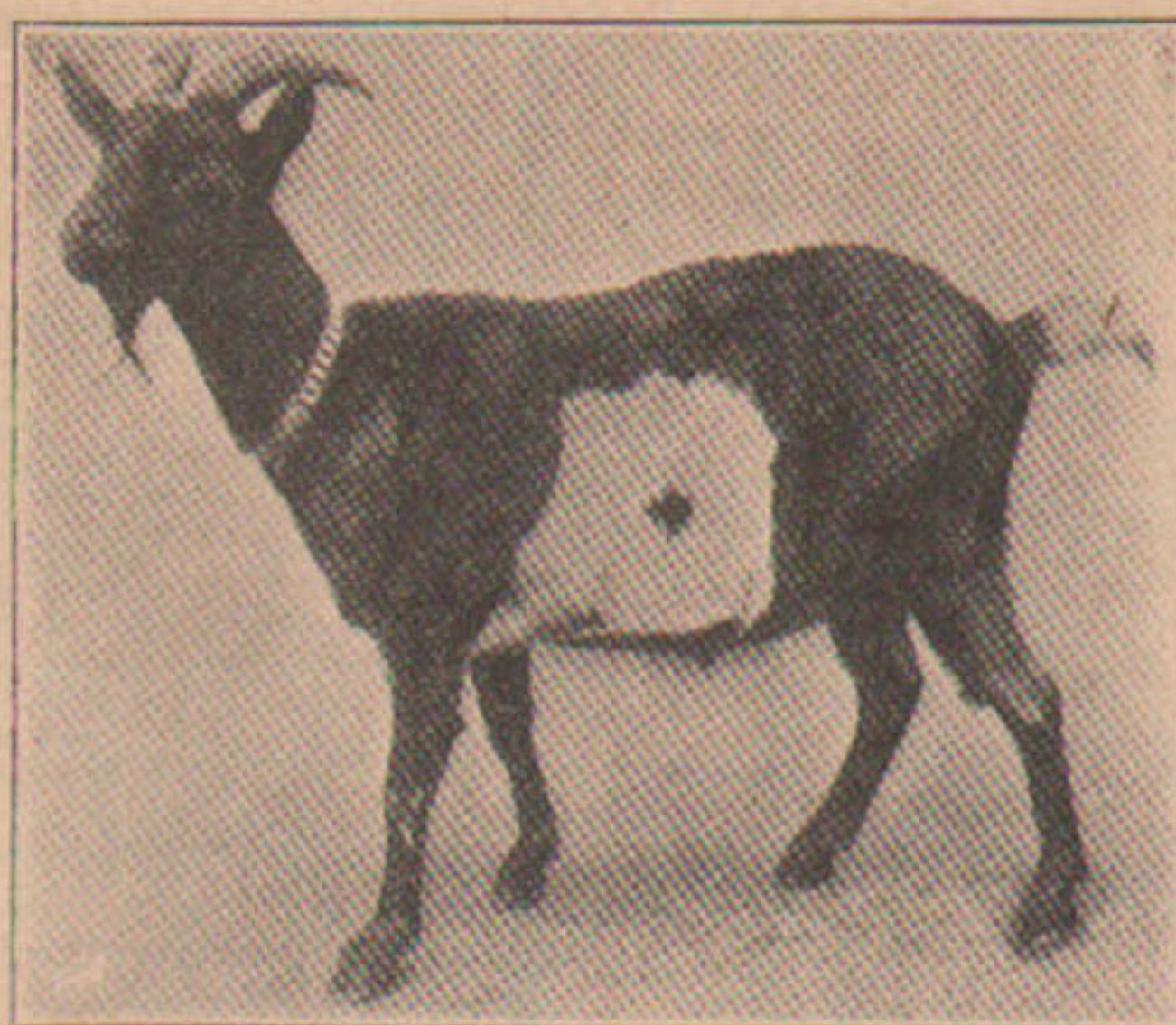
The use of the aperture rear sight, except for the long-range match rifle, had always been discountenanced by the National Rifle Association, which was largely influenced in its attitude by that of the military authorities, which was not unnatural, seeing how largely it was dependent upon the War Office for assistance with military stores, markers, etc. Then the aperture sight was allowed at Bisley in the Martin Smith, an unlimited entry competition at 100 yards, seven shots at a 3½-inch black bull's-eye with a 2-inch inner ring. The result was an immediate improvement in the average of the scores. In the Bisley meeting of 1906 there was an unlimited entry smallbore competition, with aperture sights, at 100 yards, on the same target as was used for the Martin Smith, and with my little Stevens Favorite I had the good luck to win a five-dollar prize with a score of 37 out of a possible 42. The following year they extended this shoot to two ranges, still keeping it unlimited entry, and made it seven shots at the 8-inch bull, at 200 yards, and then seven shots at the 3½-inch bull, with the 2-inch six ring, at 100 yards, and called it the Two Twenty Competition. No one had any great trouble after one or two attempts in making a possible at 200 yards, but getting the seven shots into that 2-inch ring at 100 was quite another affair, and my total score of 72 out of a possible 77 was not quite good enough for the prize list. In the next year, 1908, came the first result of the constant advocating of the use of the aperture which the smallbore enthusiasts, and Mr. E. Newitt in particular, had carried on for the last four years. A peep sight was allowed in service rifle competitions, not in the right place, since it was on the ordinary sight mounting on the barrel, where the peep sight on the 1903 Model Springfield is placed now. Still, it was a distinct and most important concession to our principles, which had their final triumph in the year 1909, when the aperture sight was allowed to be placed over the back end of the Lee-Enfield bolt and near enough to the shooter's eye to be used with ease and comfort. The use of the new sight met with universal approval from the shooting men, and was quickly extended to Australia, where I found it had been universally adopted for the service rifle, on landing there nearly eight years ago. I do not think I am making any undue claim in saying that it is owing to the influence of the British Miniature Rifle Club movement that the placing of the aperture sight in the proper place was adopted, not only for target work on the old long Lee-Enfield, but as a battle sight for the Model 1917 Enfield, which was used by thousands of Americans in the Great War and is now

in the hands of numbers of American National Guardsmen as well.

On the Lee-Enfield it was in use at Bisley until the coming of the war put a stop for a time to the great rifle meetings which had been held without a break, first at Wimbledon and then at Bisley, for fifty-four years. British riflemen found that they had sterner work for their weapons than the placing of bullets into inoffensive bull's-eyes, and targets of a very different kind upon which to use the skill acquired in times of peace on the pleasant yearly gatherings in July. Bisley Camp became a school of musketry for four years, and it was not until the present year that the great meeting was held again, with, alas, many familiar faces, among them three King's Prize men, missing forever from the camp where they were known so well.

Some of us were not content to let the influence of our club in favor of certain shooting methods be felt in a general way, but were self-constituted missionaries of those same methods when we went upon our travels. In the year 1907 I was spending part of my holiday in a village on the East Coast, where a smallbore rifle range had just been installed. I visited that range and was properly shocked at what I saw. One butt and three firing points instead of three butts and a marker's shelter and a complete set of marking rods and disks for all ranges from 25 to 100 yards. So I made haste to call on the secretary, who was one of the big local men of the district, and promptly and with very little circumlocution told him that all his methods were wrong. Naturally, he was a little inclined to question this kind of thing from a complete stranger, but, being a gentleman, he was quite nice about it, and asked me to explain, which, of course, I did, setting forth the way that shooting was carried on at all the up-to-date clubs. The system of spotting by telescope was quite new to him, and it turned out that he had a good telescope of his own, which he brought out and showed me. I had mine with me as well, and as a match was coming off on their range in two days' time, suggested that we take our telescopes to it and try them. We did so and spotted with them every shot fired in the match, which was completed in far less time than it would have taken with the marking system that had at first been installed. I had to leave there the next day and haven't been back there since and don't know whether my actions had any permanent influence. I can only hope they did.

The next year I took my holiday in the Isle of Man, a small island lying between Great Britain and Ireland and a great holiday resort for nearly half a million people from Ireland, Scotland and the English North Country and Midlands, and in which I believe is the biggest dancing hall in the world. The principal rifle club in the island was at Laxey, a village on the coast a few miles from Douglas, the capital, where I was staying. So one afternoon I went over and looked up the secretary, the principal doctor of the place,



Bulls-eye, the Ham and Petersham mascot.

an Englishman, who at one time had lived in a London suburb not far from the Southfields Rifle Club. He gave me a most cordial reception, and when he heard that I had brought my rifles to the island, asked me to bring them over the following day, which I did, and we had some shooting in a little private range at the back of his house. The aperture sight was new to him and also to one or two more club members who dropped in and had a try with it, but they all at once admitted how superior it was to the open sight. The following Saturday there was a match between the Laxey club and the band of a Highland regiment, the Black Watch, I think, which was playing in the Laxey Pleasure Gardens. So I took my rifle and telescope and more members of the club made a trial of the aperture sight and made good shooting with it. Then a few evenings later my secretary friend had me over to his place to dinner, and when it was over half a dozen club members dropped in, and for the next two hours they pumped me for all they were worth concerning the way that our club was run, and by the time they were through I had no more information left. They had it all. Some time after my return to the mainland the Laxey club secretary wrote me, saying that in spite of a certain amount of opposition, the aperture sight was firmly planted in the Isle of Man, and that being the case, I knew that it would never be rooted out again. It never is anywhere, if it comes to that.

I do not know that there is anything very much more that can be added to this rather egotistical narrative. Being compelled by circumstances to live in a suburb not near to Southfields, I joined another club, the Ham and Petersham, a club run on quite up-to-date lines and in a beautiful situation on the banks of the Thames above Richmond, close to Eel Pie Island and the famous Twickenham Ferry, which took me across the river every time I went to the range. As at Southfields, there was a comfortable pavilion and a firing point with butts at different distances, but in addition to the 25, 50 and 100 yard butts, there was one at 200 yards, upon which competitions were held on the decimal target quite regularly. At this range telescopes were of no use for spotting, so markers were em-

ployed in much the same way as on service rifle ranges. Then in addition there was an indoor 25-yard range for evening shooting and an outdoor 20-yard pistol range. This was the great attraction to me, for though I have done a whole lot of rifle shooting, yet I have always preferred the single hand weapon to the shoulder arm, and most of my time was spent on the pistol range in practice with old-fashioned revolvers of large calibre. The other members used to laugh and say that they always knew when I was about by the series of terrific explosions and clouds of smoke coming from the pistol range, which was hidden from the other part of the club by a high bank on either side. At the top of one bank a partridge built its nest and reared its young ones quite unconcerned at the racket going on a few feet away. Much the same kind of thing happened at Southfields, where a swallow built its nest in a hole at the top of the 25-yard butt, oblivious to the bullets rapping into the timber a little below, and once during the Egg Competition at Southfields I saw birds hopping along the ground across the line of fire, undisturbed by the stream of bullets whistling through the air only a foot or two above them, so one must conclude that birds know quite well when shooting is not intended for them and are not frightened by it.

Sunday afternoon shooting was tried at the Ham and Petersham Rifle Club and was not altogether a success. The Saturday half holiday being a pretty general institution in the old country, most of the members got all the shooting they wanted on Saturday afternoons, and Sunday shooting was at that time only languidly supported.

We had our mascot in the form of Bulls-eye, the club goat, born on the range and which had a large white square with a central black spot on one of his sides. But, alas, one night certain evil-minded men stole Bulls-eye, and he was never recovered, much to the regret of all. They certainly "got our goat" in more ways than one.

[This is the fifth and last article of the series by Mr. Fry.]

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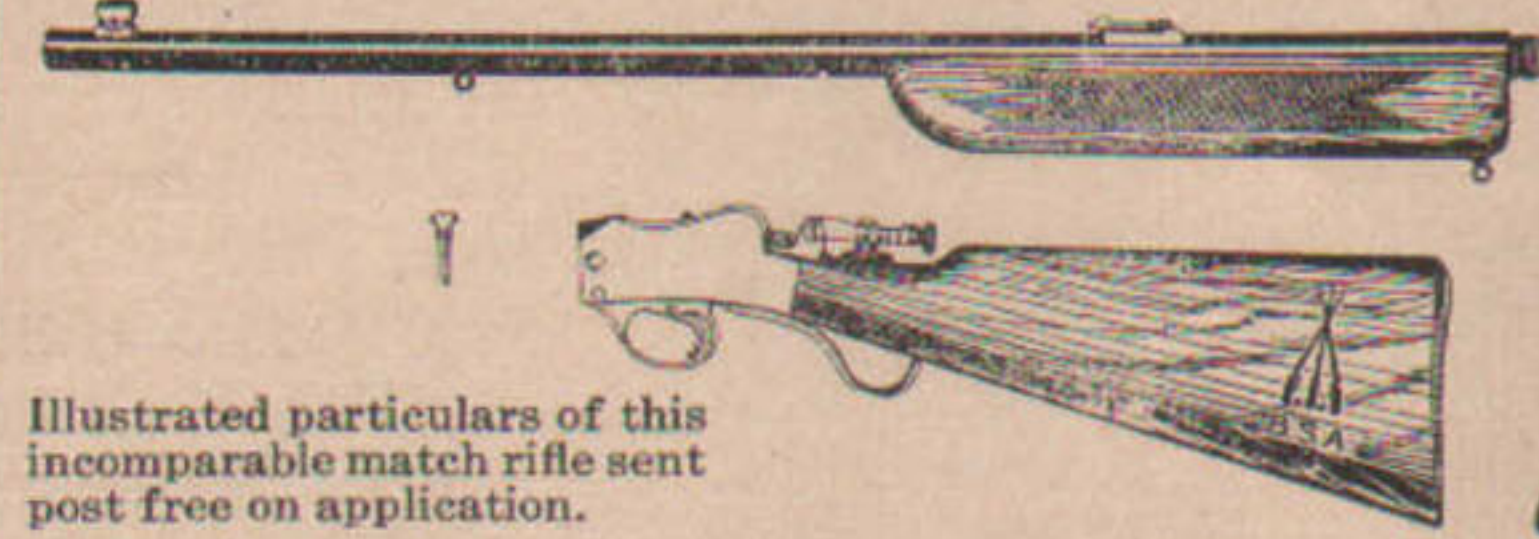
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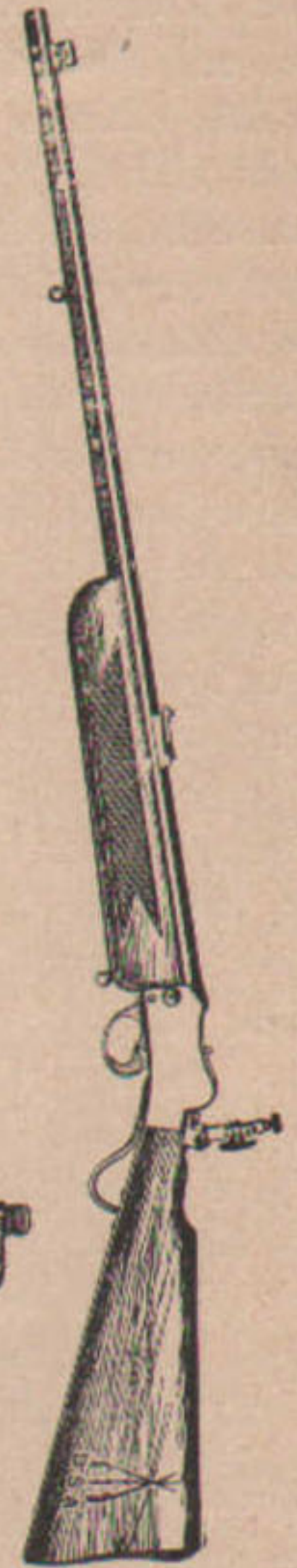
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THE object of the Infantry School is to develop approved methods of training for the use of the infantry organizations of the army and to establish standards of excellence which the infantry organizations will be required to reach.

The methods of instruction in marksmanship now in use at the Camp Benning School are to be written into the new Small Arms Firing Manual, and the scores made by the classes are to be used as a basis in fixing the minimum standard of excellence which each separate organization of the infantry will be required to attain. The day has gone by when the commander of a very poor shooting company has nothing to fear so long as his reports and returns are properly made out.

For this reason, the results obtained in the marksmanship course by the class now at Camp Benning and the methods used in obtaining these results are of immediate interest to the whole service.

The class consists of the infantry officers who graduated from West Point in 1919. One hundred and twenty-four officers com-

pleted the course, with the following result: Ninety-five qualified as expert riflemen, twenty-four qualified as sharpshooters and five qualified as marksmen. None was unqualified. The average score per man, found by adding all the scores and dividing the sum by the number of men shooting, was 260.58. The high score, 287, was made by Lieut. R. L. Williamson. As far as is known, 287 is the highest score that has ever been made in the army in record firing.

It will not do for the reader, if he is an officer of the army, to now remark, "These figures are interesting, if true, but very probably not true," and dismiss the matter from his mind. These figures concern directly every officer of the service, because they are to form a basis for the fixing of a standard which he will have to reach with his organization in the future to avoid being investigated for incompetence. It is not expected that the average company will be made up of men who rank as high in intelligence and education as this particular class, but records only slightly lower than this have been made, and are being made, with the ordinary company by using the same methods.

A brief resumé of the development of this method of instruction will show that it is

not something new in the experimental stage.

It was first developed in the second battalion of the Fourteenth Infantry at Fort Lawton in 1914 and put into effect in the entire battalion in 1915. Of the 263 men in the battalion, 167 qualified as expert riflemen, 68 as sharpshooters, 27 as marksmen, and one was unqualified. This result was published at the time, was promptly branded by the entire service as false, and was dismissed from the mind.

In 1916 it was used in Company B of the Twenty-fifth Infantry at Schofield Barracks. The result was that this company, in one target season, went from the worst company in the department, by a wide margin, to the best by an equally wide margin, and this in a department where there were four white regiments, all of them proud of their shooting ability. The results were accepted as true in this case, and a good deal of interest in the methods used was shown.

On account of the result obtained in the Hawaiian Department, this method of instruction was put into effect in the Eighty-third Division at Camp Sherman in 1917. Six hundred officers and noncommissioned officers were taken to Camp Perry to be trained as instructors, while the range at Camp Sherman was being built. The class at Camp Perry lasted a little over two weeks, and the average score per man on the qualification course was a fraction higher than expert rifleman. This class was a purely Eighty-third Division affair. It had no connection

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with the school later established at Camp Perry. The results obtained with the division at Camp Sherman under the guidance of these instructors were no less remarkable. Each colonel who finished target practice with his regiment gained a reputation for untruthfulness among those colonels who had not yet seen the thing work out.

When the Eighty-third Division went to France, it was made a depot training division. It established and ran six large rifle ranges, with a total of 775 targets, and trained from thirty thousand to a hundred thousand recruits a month. The average time a recruit was in the hands of the division was ten days, and during these ten days they learned to shoot. Owing to the results being obtained with these recruits in the Eighty-third Division, the other training divisions were ordered closed, and the Eighty-third was directed to be ready to handle all recruits coming to France, the number expected being about one hundred and fifty thousand per month. This number never actually arrived during any one month, but the division was ready for them, and would have had them but for the signing of the armistice.

Based upon the results being obtained at Le Mans, where the Eighty-third Division ranges were located, the authorities at G. H. Q. decided to adopt the same system of rifle training for the whole Expeditionary Force, and three hundred officers and non-commissioned officers of this division were sent out to the various infantry organizations as instructors. Several hundred thousand of the pamphlets used at Le Mans were distributed to the army, and later this was revised and issued as the A. E. F. Small Arms Firing Manual. Wherever the prescribed methods were carried out with any attention to detail, the results were very good, in spite

of the handicaps as to weather and home-sickness and lack of range facilities. Gen. Pershing, in one official document on the subject, states that the "methods were applied to the infantry of the American Expeditionary Forces with extraordinary success."

It is not the intention to give in this article a detailed description of the system. The exact methods to be followed will be laid down in "The Soldier's Handbook of the Rifle and Score Book" and in "Rifle Marksmanship" (revision of Small Arms Firing manual), both of which will be issued to the service before the next target season. However, a short description of the way the class was handled and the difficulties that were encountered and overcome, and a discussion of some of the methods that differ materially from those usually used in the past may prove interesting and possibly instructive.

The A. E. F. Small Arms Firing Manual was used as a guide, and each student was issued a copy of the manual, together with the small lecture pamphlet that was printed in France as a guide to instructors.

Eight days were devoted to the preliminary instruction, and this preliminary instruction was divided into six separate phases or steps. Each step was preceded by a lecture and demonstration to the assembled class, showing just how each of the things pertaining to that step was to be done, and explaining the reason for doing it and its relation to shooting as a whole. The steps were: Sighting and aiming, positions, trigger squeeze, rapid fire, effects of light and weather and sight changes, and final examination of students on all points taken up in preliminary. Nomenclature and repair of rifles were not made a subject of special study. During the course of the instruction, the necessary nomenclature was gradually

learned, and the necessary repairs that were made on the students' rifles from time to time gave them all the instruction necessary.

The main points of difference between the preliminary instruction under this system and that usually given to troops in the past are:

(a) None of the purely physical exercises, known as "push and pull," are given.

(b) The triangle sighting exercises are given at a range of 200 yards with an 8-inch aiming disk, after first having instructed the class in the principles of aiming at close range with the small disk.

(c) The description of the proper method of pressing the trigger differs materially from the description usually given, and the trigger squeeze exercise is different.

(d) Each man undergoing instruction has a coach beside him whenever he is going through any of the preliminary exercises, and no man is ever idle while waiting his turn to be put through an exercise. Each member of the class is either coaching or being coached during the entire working period.

(e) Each squad leader keeps a card, on which is printed each of the items necessary for a man to know in order to be a good shot. The name of each member of the squad is written on this card, and each one must qualify individually in all of the enumerated points before he is allowed to go on the range.

The reasons for the above enumerated differences are briefly as follows:

(a) Any man who is physically able to walk to the firing point has all the strength necessary to make a score well over 40. If he is making very low scores, it is because he is not aiming and squeezing the trigger properly. To give him "push and pull" exercises is no more beneficial than to have him take a trip in a balloon or a ride in a sight-seeing

automobile, or doing anything else except to learn to hold his aim while he squeezes the trigger in the right way. To take a man off the firing point who is making low scores and give him "push and pull" with a view to improving his scores is about as sensible as to have him skip the rope as a means of teaching him how to remove a tire from an automobile. Good physical condition is, of course, an asset to an excellent shot, and physical exercises may help to raise his scores from an average of 47 to an average of 47.5, but physical exercises will not help in the least degree a man who is averaging under 40. Each man undergoes all the necessary muscular training while he is being taught to aim, how to take the correct positions, how to squeeze the trigger, and in acquiring a habit of smooth and rapid bolt manipulation.

(b) In long-range sighting exercises men learn to take an accurate and uniform aim at a distant bull's-eye, the outlines of which are more or less indistinct. If these exercises are held only a short distance where the outlines of the bull's-eye are clearcut and distinct, they will feel at a loss when first taken to the range to fire at a bull's-eye that is distant. Many of them will imagine that there is something wrong with their eyes and will become discouraged before they start to shoot. If they have been able to make small triangles at long range during the preliminary period, they will know that their low scores are not the result of any real or imaginary defect in their eyes which prevents their taking a uniform aim.

(c) Practically all writers on the subject of rifle firing have described the trigger squeeze in the wrong way. They had the right way in mind, but they so worded their description that anyone trying to follow out the description would do it the wrong way. No good shot gives the trigger a sudden pressure at the instant he sees the sights properly aligned. He never increases the pressure on the trigger except with a steady increase, and consequently he does not know the exact instant at which the discharge will take place. He may, through training, be able to fire the piece in as short a time as one second, but still he does not know at just which part of the second the discharge will take place, because the pressure is a steady one and not a sudden jerk. Consequently the beginner must be told to squeeze the trigger with such a steady pressure as not to know exactly when the rifle will go off. To this description of the trigger squeeze, and to the methods adopted to see that it is done, is due the whole credit for the increase in scores under the methods now in use over the methods usually employed in the past. Up to a state of excellence considerably above that required to be an expert rifleman the difference between shots is due entirely to their difference in the way of squeezing the trigger.

The fact that the whole art of shooting is in pressing the trigger so steadily as not to know when the hammer will fall was demonstrated on a class of seventy-six field officers at the Second Corps School in France. These officers ranged in ability from men who had had no target practice to expert riflemen. After a short course in aiming, positions and trigger squeeze, they were taken to the rifle range, and after getting their elevations, fired the best score they could, alone. Then, without leaving the firing point, they fired another score in which the members of the class who were acting as coaches pressed the trigger for them. The coaches had been instructed to watch the firers' back until it was seen that he was holding his breath, and then to fire the piece by a steady pressure on the trigger. The result was that only three of the class of seventy-six made a higher score when they fired alone than they did when the coach pressed the trigger for them. The lowest score made when the coach

pressed the trigger was 42 out of a possible 50. The lowest score made by any member firing alone was 26. A month later a second class of the same number of field officers was put through the same test with exactly the same results. Only three of them made a higher score when they fired alone; the lowest score when the coach pressed the trigger was 42 and the lowest score made when firing alone was 26.

The trigger squeeze exercise, for the first half day at least, is given in the prone position, so as to eliminate at the very beginning the temptation to try to snap in the shot at the instant the sights touch the bull's-eye.

(d) The best way to learn anything is to attempt to teach it. The work in the squad is so organized that no two men are ever idle. While they are waiting their turn to be worked on by the squad or platoon leader, they are paired off and take turns in coaching each other, either on the day's work or on the work of the preceding days.

(e) Without an individual check-up system there is no efficiency in any form of instruction. Men can go through a drill or a phase of instruction as part of a squad or platoon any number of times, and then an examination of the individuals will reveal the fact that each one has missed some of the points and that some of them have missed most of the points. Where an individual check-up system is used from the beginning, each man will receive individual training on each of the points, and he will be given the most instruction on the points in which he, individually, requires the most instruction.

This individual instruction, both in the preliminary work and in range practice, requires close personal attention from the officers and noncommissioned officers of the organization. No system of instruction will work itself. No magic elixir has been devised that can be poured over a pamphlet and thereby cause the mere possessor of it to do good shooting. One officer in the Hawaiian Department, having observed the results obtained by this method in another company, decided to use it on his company. But after having obtained the pamphlet and read it over, he complained bitterly about it. He said that it was not a system at all; it was "just a hell of a lot of work." So it was, and so it is. But it explains how to put in the work where it will do the most good.

During the preliminary period a rainy day was utilized in examining rifles, repairing defects and in reducing trigger pulls and eliminating the creep. The rifles, having been turned out during the war, required a great deal of attention. Many loose front and rear sights were found, and a few rifles were found in which the barrel was not fastened tightly to the receiver. As many Size 6 peep sights as could be located in the post were obtained and were put on the rifles of the men who had been having difficulty in aiming. All of the sights should have the Size 6 peep if they can be obtained. During the period of range practice a mechanic with a repair kit was stationed back of the firing line, and he was busy most of the time. In spite of the fact that grease was used on the bullets, many of the rifles became metal fouled rapidly. This was removed by the mechanic on the range with the ammonia solution. Usually the use of grease on the bullets will prevent all metal fouling, and even powder fouling. It is possible that rifles turned out during the war have not as smooth a finish on the bore, and metal foul more readily in consequence.

The work on the range was so organized that no man was ever idle. A row of pistol targets was placed on the flank of each firing point and so located that the pistol and rifle firing points were on one line and separated by an interval of about 50 yards. The class was divided into two platoons, and while one platoon was firing on the rifle range the

other was firing on the pistol range, some of the time during the eight days of preliminary practice having been devoted to preliminary pistol work.

There were two orders on each range. While the first order was firing the second order acted as coaches. When the second order was firing, the first order acted as coaches. When the first platoon finished firing on the rifle range, it moved to the pistol range, and the second platoon took its place on the rifle range. The platoon on the pistol range finished their scores first, and the men of this platoon would be back of the firing points on the rifle range in time to fill up the targets as fast as they became vacant. When the rifle firing was finished at one distance, the whole line moved back and continued the alternate rifle and pistol firing as before.

Some of the time the platoon that was not firing was back of the line practicing rapid bolt manipulation in preparation for rapid fire. Full-sized rapid-fire targets were placed at appropriate distances for this practice. The night study periods were usually devoted to theoretical instruction on the use of the automatic rifle.

Practically all of the coaching was done by the members of the class. The school instructors watched the men who were coaching and prompted them when they failed to apply the necessary corrective measures to the man firing, but the actual coaching was done almost entirely by the members of the class.

The coaches devoted their entire time in watching to see if the firer squeezed the trigger so steadily as not to know just when the discharge would take place, and to correcting the fault if the trigger was not squeezed in this manner. Any man who has been through a proper course of preliminary work has learned to aim, to hold well enough to make a good score. As soon as he has learned to squeeze the trigger properly, he is a good shot. No human being, no matter how old a shot, can avoid flinching, or bracing for the shot, if he knows exactly when the shock is to come. The coach detects this flinch by watching the firer's right eye, and every time he sees him wink, he cautions him that the trigger was not pressed properly. When a man is doing poor shooting, the coach proves to him that it is because of improper trigger squeeze by pressing the trigger for him a few times, while the man under instruction holds and aims the rifle. Shots fired in this way are almost invariably good ones.

In order to eliminate at the very beginning the temptation to try to snap in the shot at the instant the sights are seen to be properly aligned, the firing began with ten shots in the prone position with the sandbag rest at each of the ranges—200, 300, 500 and 600 yards. This was followed by slow fire in the prone position without the sandbag rest at the same distances. Thereafter slow and rapid fire, at the distances and in the positions prescribed for the qualification course, alternated.

The one radical change in the form of rapid fire instruction was the mixing of dummy and live cartridges in such a way that the man firing did not know which would go off and which would not. The value of this method of training for rapid fire can hardly be exaggerated. Wherever it has been used, it has proven a success. Many men who are excellent slow-fire shots will flinch as soon as they try to fire a rapid-fire score; most old shots do it, although they will not admit it. This flinch is due to the fact that they press the trigger in rapid fire with a sudden pressure instead of a steady pressure, consequently they know exactly when the shock is to come and invariably brace for it. This bracing for the shock is something that no human being can control, if he knows the exact instant it is to come.

When the discharge takes place, this brace—
(Concluded on page 18)



SHOOTING NEWS AND COMMENT



WALTER WINANS, the big-game hunter, differs with John Lynn upon the question of moving-target shooting, and in a letter from London, under date of November 20, gives some interesting facts concerning snap shooting in connection with Mr. Lynn's story which appeared in the issue of November 1.

Mr. Winans says:

"May I point out where I differ with Mr. Lynn on the above subject?"

"He says that the deer's relative size often leads to carelessness in aiming and states that every old hunter knows that real woods shooting demands finer grouping than putting holes in the 2 x 5 sheet at 100 yards.

"Now, I have shot at running-deer targets since 1870 and have found that one can only win if one gets one's shots into the bull's-eye (6 inches invisible from the firing point) at 100 yards; 'hitting into the 2 foot by 5' not only does *not* win anything, but the hinder part of this space, if hit, entails a fine of \$1 each bullet hole.

"I find it easier to kill a stag in the open at 100 yards when running straight than to make a bull's-eye on the running-deer target; because a hit in the head, neck, spine or kidneys, as well as the heart, brings down the real deer, but only a hit in the heart counts on the running-deer target.

"Next he says the swinging pendulum is the best way to learn shooting at real deer. Now, I have killed some 3,000 deer and other big game, mostly on the run, and I long ago found that the swinging pendulum not only did not teach shooting animals on the run, but spoiled one's swing and timing. The pendulum only needs waiting to take it at the end of the swing, aiming at a spot and waiting till the object swung to there. One needs something going a long way and taking it part of that way; something that only goes a few feet one cannot get swinging the rifle.

"My idea for shooting practice for deer is to use a 28-bore shotgun, extreme choke, fitted with rifle sights, and shoot at clay pigeons or to roll balls down hill or have them thrown across one, when shooting with a rifle. A very good target is made by wooden balls rolling down a switchback shallow trough; when you hit them they jump the track. The trough should be made of wood and should be shallow, then the bullets do not ricochet, as they would from iron.

"As to shooting at live running deer up to 500 yards, if anyone did such a thing in the shoots I have rented he would be at once stopped and the lease of the shoot cancelled. A man tried long running shots at deer three years ago (during the War) when he was put to shooting deer for meat, like I was.

"I was sent for to take his place, as he had deer with broken legs running about and rotting dead deer found where they had gone off to die, from his running long shots. If any man shoots at a running deer at over 200 yards (unless to kill a previously wounded one) he would not be allowed to shoot in any deer forest in this country or in any continental or African preserve; it is such shooting which is exterminating big game all over the world. No man should expect he is confident he can not only hit the animal, but

drop it in its tracks. Long shots at unwounded animals are disgusting; it leaves wounded animals to go off to die.

"The better the hunter, the closer his shots are taken; it is only a man who is no hunter who fires long shots.

"Most men think that if the animal sees them it is useless trying to get any closer. If an animal gets your wind, then it is difficult afterwards to get up closer to him; but otherwise if he sees you and you have the patience to keep perfectly still till he gets feeding again or takes his eyes off you, you can begin creeping closer again.

"I have got up to within 20 yards of a stag after he had looked at me at 150 yards off, and I was in full view of him all the way, but I took forty minutes to cover the distance on my back, feet foremost, and stopped dozens of times as he looked in direction. He finally started walking towards me, and I shot him a few yards off. The most successful big-game hunter I ever met was a bad rifle shot—scarcely a second-rate one—but he was a marvelous man at getting close.

"Shooting at stones rolled downhill is very dangerous. Bullets go off at all sorts of angles from them."

"WALTER WINANS."

DETAILED results of the 1919 Outdoor Championships of the United States Revolver Association for 1919, in which Dr. Snook established his new world record of 651 for the Individual Military Championship of America, have been announced. The national standing of the competitors in the five major events shows:

NATIONAL STANDING.

MATCH A, REVOLVER CHAMPIONSHIP OF AMERICA.

	Score.
Capt. T. K. Lee; S. & W., .44 cal.; Peters ammunition	463
D. J. Gould, Jr.; Colt O. M., .38 cal.; hand load	453
Dr. Carl W. Wahrer; S. & W., .22 cal.; U. M. C.	452
C. M. McCutchen; S. & W., Peterson; Peters	450
A. G. Bitterly; Peters	448

MATCH B, PISTOL CHAMPIONSHIP OF AMERICA.

Capt. T. K. Lee; .44 Rem.; Peters ammn.	472
Lieut. R. C. Bracken; .22 S. & W.; U. M. C.	470
Capt. W. P. Northcott	453
A. G. Bitterly; Peters	453
Dr. Carl W. Wahrer; S. & W., .22; U. M. C.	452

MATCH C, INDIVIDUAL MILITARY CHAMPIONSHIP OF AMERICA.

Dr. J. H. Snook; Colt Army Special; Peters	651
C. M. McCutchen; S. & W., .38 cal., Mil. Rev.; Peters	623
Capt. T. K. Lee; Colt, .38 cal., Mil. Rev.; Peters	611
Lieut. R. C. Bracken; .30 cal., Luger; Peters	551
Dr. J. S. Bastey; S. & W., .45 cal.; F. A.	528

MATCH F, POCKET REVOLVER CHAMPIONSHIP OF AMERICA.

G. F. Hoffman; Colt Army Special, .38 cal.; U. M. C. ammn.	211
Dr. J. H. Snook; Colt Army Special, .38 cal., 4 in.; Peters	209
A. M. Poindexter	207
D. J. Gould, Jr.; S. & W., .32 cal.; U. M. C.	206
Dr. H. A. Baylis; S. & W., .38 cal.; Peters	204

MATCH G, NOVICE RE-ENTRY MATCH.

A. H. Means; S. & W., .22 cal.; Winchester ammn.	225
E. N. Dart, S. & W., .22 cal.; U. M. C.	219
Mrs. Frederick C. Carter; S. & W., .22 cal.; U. M. C.	218
C. P. Hoppin; S. & W., .22 cal.; U. M. C.	216
H. C. Stone; S. & W., .22 cal.; U. S. N. R. A.	214

THE first Annual Indoor Team Championship of the American Offhand Rifle League has been announced by C. T. Westergaard, Charles City, Iowa, secretary. This match is the third of the series instituted by Mr. Westergaard, the others being individual events indoors and outdoors. The conditions for the offhand match are:

Eligibility—Open to any shooting club in North America. Entrance fee per team, \$5. Match to be shot on home range and may be shot at any time from January 25 to February 7, both days inclusive. Targets must be in conductors' hands on or before February 14 for scoring.

Team—Any number up to ten shooters may shoot on a team, but only the five highest scores will count for record.

Distance—75 feet from rifle muzzle to target.

Target—The American Indoor Match target counting from 1 to 10 with ¼-inch rings, 2-inch bull.

Number of Shots—Twenty for record for each shooter, five shots on a target. Each team entered will be forwarded forty targets by the secretary. In case a club has less than ten men shooting, the unshot targets must be returned to the secretary.

Position—Offhand. No artificial support of any kind allowed.

Rifle—Any using .22-calibre rimfire ammunition and any sights, including telescopes. Sling straps may be used.

Witnesses—All official shooting must be witnessed by two members of the club, who shall sign the target, that conditions were strictly complied with.

Prizes—After expenses are deducted from entrance fees, the balance will be distributed in cash prizes to the three highest teams and every third team thereafter.

Send entrance fee to C. T. Westergaard, secretary, Charles City, Iowa.

Don't forget the third annual home-range American Indoor Record Match, fifty shots at 25 yards, which will be held March next under the management of S. M. Tyrrell, 1800 North Halsted Street, Chicago, Ill.

INDICATIONS are that there will be enough competitions during the coming year to keep the most exacting riflemen interested. In addition to the usual program including the National Matches, the Olympic Games will be held at Antwerp in July, and a movement is afoot to repeat the Inter-Allied Games that were held at Le Mans, France, this spring.

Preparations were begun for the participation of American marksmen in the Olympic Games at a meeting of the former American Olympic Committee held November 28 at the New York Athletic Club. As a result of this meeting, Col. William Libbey, president of the National Rifle Association, will look after the interests of the N. R. A. in this connec-

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tion, and Dr. Reginald H. Sayre will represent the interests of the United States Revolver Association.

It is probable that the question of the 1920 Olympiad will be considered at the N. R. A. annual meeting, which will be held in Washington January 14, and at the U. S. R. A. meeting, scheduled for January 21 at the 71st Regiment Armory, New York City.

A press dispatch from Coblenz, Germany, under date of December 5, announces the likelihood of a second Inter-Allied meet. The dispatch reads:

"Capt. Alexander P. Withers, athletic officer of the American forces in Germany, is busy sounding the various allies guarding the Rhine frontier on the possibilities of holding a second series of Inter-Allied games next spring. The members of the American forces are keen to enter such a contest, and it now looks as though the French, Belgian, English and other nations with armies in Germany and elsewhere in Europe will fall in line with the suggestions made to them by Capt. Withers.

"The proposal advanced by Capt. Withers is to hold a regulation series of games, covering the same program of contests as was held in Paris last June. Just where the meet will take place is problematical, but if arrangements can be made, it will be at the Pershing Stadium, in Paris, where the original games were staged.

"Pat' Brannon, formerly athletic director of the Arkansas Agricultural College, and now Y. M. C. A. director with the American overseas forces, has offered the services of his entire staff if the games should be held. Brannon himself is an experienced track and field coach and would organize and coach the American team in these sports. There are a number of track stars and former col-

lege champions with the American forces, and a first-class team could be organized for international contests.

"The proposed series of games would be held early in May, in order not to conflict in any way with the 1920 Olympic Games at Antwerp in July. The Inter-Allied Games would serve the double purpose of training all teams and of allowing those European nations that so desired to select the best soldier athletes who make good in the games to represent their respective countries in the Olympic Games six weeks later. It is also possible that some of the American team might prove good timber for the Antwerp games, and arrangements would then be made with the A. A. U. of the United States to use any men that might be required."

SOME very interesting facts regarding rifle practice in the Marine Corps are contained in the records at headquarters.

During the first eleven months of 1919 Marines fired for qualification in ten foreign countries and possessions, namely, Ireland, Siberia, China, Germany, France, Cuba, Santo Domingo, Haiti, Azores and Nicaragua, and in nineteen States, Territories and possessions of the United States, viz: Virgin Islands, Philippine Islands, Territory of Hawaii, Guam, Porto Rico, Maryland, Florida, California, Virginia, Massachusetts, South Carolina, Washington, New York, New Jersey, Colorado, Texas, Rhode Island, Pennsylvania and New Hampshire.

In conducting this target practice over 10,000,000 rounds of ammunition were expended, and approximately 19,000 out of 21,000 men firing qualified as marksmen or better.

Orders directing that recruiters going to rifle ranges for rifle practice be given a short

course of instruction in the nomenclature and operation of various makes of machine guns have been issued. As the result of this instruction recruiters will be able to converse intelligently on the subject of machine guns with civilians applying at recruiting stations for information along that line.

Maj. Littleton W. T. Waller, Jr., U. S. M. C., has been appointed Inspector of Target Practice, vice Lieut. Col. W. Garland Fay, U. S. M. C., relieved.

Col. Fay served over one year as Inspector of Target Practice, during which time he aided materially in the development of the best rifle team the Marine Corps has ever had. This team, under the leadership of Maj. W. Dulty-Smith, succeeded in establishing a remarkable record in the National Matches and Sea Girt Matches of 1919.

The following-named officers and enlisted men made scores of 280 or better in the army qualification course, according to reports received during November, 1919:

- Corporal Ralph B. Sutton, M. B., San Diego, Cal., 286; Private John D. Lawhorn, M. B., Boston, Mass., 285; Sergt. Thomas J. Welby, M. B., Boston, Mass., 284; Private Charles E. Morley, M. B., San Diego, Cal., 282; First Sergt. Edward Kellison, M. B., San Diego, Cal., 282; Private Robert W. Graham, M. B., San Diego, Cal., 281; First Sergt. Edward J. Keenan, M. B., San Diego, Cal., 281; and Private Alvah L. Pickett, 280.

The Cortlandt Hook and Ladder Rifle Team, of Peekskill, N. Y., composed principally of veterans of the war with Germany, and a team from the Peekskill Rifle Club, participated in a match which called for ten shots offhand at 200 yards, "B" target. The Rifle Club won by a score of 455 to 420.



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INQUIRIES OF GENERAL INTEREST

In this column, conducted by Lt. Col. Townsend Whelen, will be answered inquiries pertaining to target and hunting small arms, hunting licenses, game, guides, and kindred subjects. An effort will be made to reply to inquiries direct by mail before the appearance in this column of the answer. This service is free to all, whether the inquirer is a subscriber to *Arms and the Man* or not.

Q. What is your opinion as to the value of a telescope sight on a hunting rifle?

A. A telescope sight will not make any rifle shoot more accurately. It permits a more accurate aim, particularly at game which is usually difficult to aim at accurately on account of its protective coloring, surroundings and background. A telescope sight is particularly useful on a rifle intended for woodchuck and squirrel shooting, but it must be well made both mechanically and optically, and have mountings which have both fine adjustment and positive adjustment, or it will be far from reliable. A telescope sight is useless for shots at moving game unless it has a large field and can be mounted low down on top of the barrel, so that the check pressure against the comb of the stock will furnish a guide to lead the eye into the field of the telescope instantly. The new telescope sight developed by the Winchester Repeating Arms Company during the war and now

about to be manufactured by the Government, impressed us as the first telescope we had seen that offered a promise of being really useful on a big-game rifle. But all telescope sights so far manufactured are delicate instruments, with delicate mountings, and are placed high up on the rifle, where they are much liable to damage in the rough and tumble work of big-game shooting. All telescope sights are prone to develop so many different errors that they should be checked up by accurate rest shooting every few days. We believe that a good glass will well pay for itself on a woodchuck or squirrel rifle used in the woods near home, but that for more serious work it will prove more of an aggravation and bother than a real help. A telescope sight on a target rifle is an entirely different matter.

Q. How does the Springfield rifle compare with the rifles of European nations as a military arm and as a hunting weapon?

A. The Springfield rifle is the most accurate in the world for target practice at ranges over 100 yards. One using another rifle is hopelessly handicapped against the man who shoots a Springfield, the skill of both being equal. The Springfield rifle, equipped with a Lyman No. 103 rear sight on the cocking piece (military sight removed), and loaded with one of the soft-point expanding bullets, is the very best big-game rifle obtainable. It also hopelessly outclasses all others. Many riflemen purchase Springfield rifles and have them remodeled into fine sporting arms. This is

not necessary, however, as you can simply purchase another "cocking piece and firing-pin rod," send it to the Lyman Gun Sight Corporation, Middlefield, Conn., and ask them to attach a No. 103 rear sight to it. Then when you wish to use your rifle for hunting, all that is necessary is to change the cocking pieces and remove the military rear sight.

These clubs have been admitted to membership in the National Rifle Association of America:

CIVILIAN CLUBS.

Indiana.

Cromwell Rifle Club of Cromwell: Neal F. Hontz, secretary; Milo D. Snyder, president; Roscoe D. Le Count, vice president; Morris C. Miller, treasurer; John F. Gorsuch, executive officer.

Oregon.

Baker National Rifle Club of Baker: I. W. Lucas, secretary; Walt L. Dutton, president; Edgar Pratt, vice president; Chas. E. Baird, treasurer; Dr. C. N. Barrett, executive officer. Eighty-three members.

Nevada.

White Pine County Rifle Club of Ely: Jay E. Brinton, secretary; D. Boyd Smith, president; Harold Jackson, vice president; William Biggane, treasurer; James S. Bennett, executive officer. Thirty-five members.

New Jersey.

Camden Rifle Club of Camden: Clinton I. Evans, secretary; George Scott, president;

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L. Bamberger Rifle Club of Newark; Carl J. Bein, secretary; Karl S. Pennell, president; Wm. A. Bohr, vice president; A. H. Aronson, treasurer; Richard D. Maldeis, executive officer. Twenty-five members.

Marksmanship at the Infantry School

(Concluded from page 14)

ing for the shock is covered up by the consequent recoil, and the firer is not conscious of having braced. But when the cartridge fails to explode and there is no recoil, the shoving forward of the shoulder to meet the shock that does not come is apparent to everyone in the vicinity, including the man who did the bracing. After he has done this a few times he will try not to brace for any of the shots, so as not to appear foolish in the eyes of the observers and in his own eyes. He does this by giving the trigger a steady instead of a sudden pressure.

With this class nothing but scores of mixed dummies and live cartridges were used until after they had had several days of rapid-fire practice. And after they began to fire full scores of loaded cartridges, these scores were always preceded by a score with dummies mixed in, to steady them down. The result of this training was that on record practice practically no poor groups were made in rapid fire. The few low scores that were recorded were due to getting the group in the wrong place, but the groups themselves were all good.

The ammunition used in the instruction practice was all Class B, and was very poor stuff. It had to be very carefully sorted in order to get any kind of instruction at all out of it. Some of the clips of five cartridges had bullets of five different shapes. About sixteen thousand rounds of pre-war ammunition were discovered in the storehouse and set aside for record practice. Each member of the class had only a few rounds of this to fire at each range, to get his elevations, before going to record practice. This lack of good ammunition was a decided handi-

cap, but by a careful sorting of the ammunition and the saving of the good ammunition on hand for record practice, the handicap was to a great extent overcome.

No gallery practice preceded the range practice, due to the fact that none of the reduced-load cartridges for the service rifle, which is the gallery cartridge to be used in the future, were available.

The record practice was carried out with the strictest interpretation of the rules for record practice and competitions. In addition to the scores kept at the firing line, scores were kept in the pit by officers and certified to by them as correct. As the officers in the pit did not know for whom they were scoring, and as the pit scorecard had to be checked up later with the firing-line card, there was no chance to falsify a score. No scorecard from the pit differed from the scorecard at the firing line by more than one point, and in the few cases where this difference existed it did not affect the qualification of the member of the class concerned.

The total elapsed time, from the beginning of the preliminary instruction to the completion of the record practice was a little over five weeks. And during these five weeks the pistol instruction was also held as well as all of the theoretical instruction in the automatic rifle.

In conclusion, it might be well to add, for the benefit of those who are interested in avoiding future investigation for poor results in target practice, that the danger of the new manual that will be issued lies in the fact that at first glance it looks like the same old stuff. The careless reader is apt to glance through it, and, seeing that the headings are very familiar, take for granted that the reading matter under the headings is also familiar and proceed to go through the target season in the same old familiar way. The results obtained by this kind of an officer will be surprisingly poor.

The new manual really lays down a system in detail which, if carefully followed, will really produce real results. To an officer who takes a sporting interest in the shooting game it will be a pleasure. To the officer who is not interested it will probably be, to quote the captain in Hawaii, "a hell of a lot of work."—Col. A. J. MacNab, in *The U. S. Infantry Journal*.

WANTS AND FOR SALE

Each subscriber to 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.

OLD-TIME and modern firearms bought, sold and exchanged. Kentucky flint-lock rifles, old-time pistols, revolvers, guns, swords, powder horns, etc. Lists free. Stephen Van Rensselaer, 805 Madison Avenue, New York City.

FOR SALE—A Bardou Rifle Range Telescope, 2-inch objective, 4 draw, first-class condition, \$25.00. Also, Winchester 5-B Scope No. 2 Mounts, perfect, \$15.00, f. o. b. Chicago. C. M. Ercanbrack, 200 S. Market Street, Chicago, Ill.

WANTED—One Model 1898 Krag Rifle and one Model 1899 Krag Carbine. A. L. Hollister, Chester, Montana.

FOR SALE—Stevens .22 Long Rifle, 414; fine for indoor match work; mounted with 6-power Stevens telescope, adjustable focus and aperture, sling strap, trigger stop, etc. A fine, accurate rifle; first \$35.00 takes outfit. C. E. Pierson, care of Peters Cartridge Company, Kings Mills, Ohio.

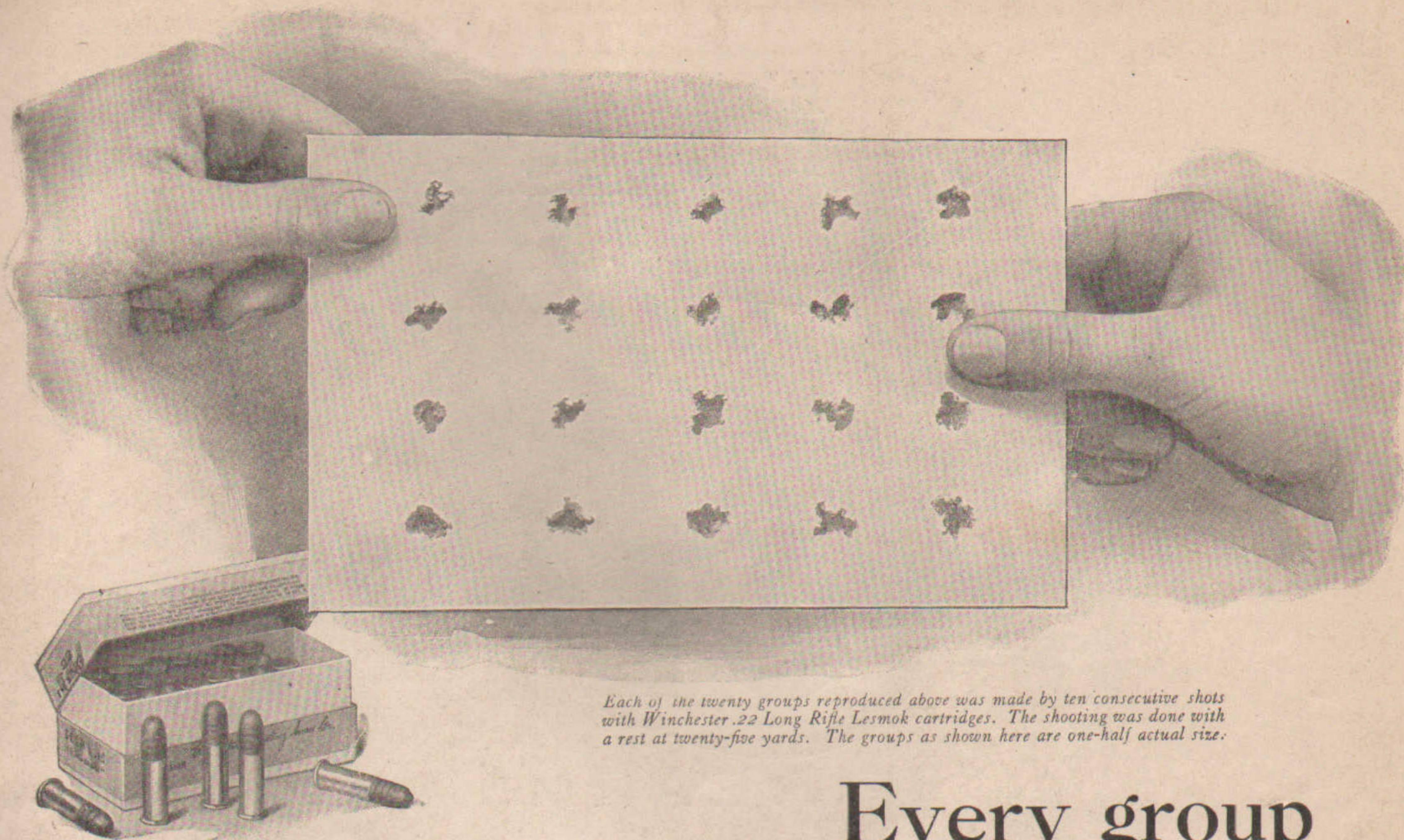
FOR SALE—Savage .22 Long Rifle, Bolt Action Repeater, new; very accurate; case, sling, two extra clips; bargain, \$23.00. Geo. H. Studt, Kansas City, Kansas. Route No. 4.

FOR SALE—Krag, with special hand-made extremely accurate barrel, sights 1901 and Lyman receiver wind gauge No. 34, and sling strap, in very fine condition, \$15.00. Ideal No. 3 reloading tool, sizing die and 178 grain mold, 200 F. A. shells, \$7.00; 500 full patch 170 grain bullets, \$4.00; rifle and tool not separated. Another Krag, as issued 1902 sight, no strap, \$5.00; boxing extra. V. R. Olmstead, 33 Brookfield Road, Upper Montclair, New Jersey.

FOR SALE—Antique firearms, swords, powder horns, flasks, battle flags, medals, prints. Catalogue free. Nagy, 33 S. Eighteenth Street, Philadelphia, Pa.

FOR SALE—One .45 Automatic Pistol, 1911 model, condition A No. 1, shot but ten times, together with new holster and 50 rounds of ammunition; postoffice money order of \$24.00 takes outfit. C. M. Kerns, 1523 Seventh Avenue, East Altoona, Pennsylvania.

WANTED—Checked steel butt-plate, with trap, such as was used on Sauer-Mausers Rifles; either new or second-hand. Will pay a good price. Write to Dr. E. R. Larned, 279 Edison Avenue, Detroit, Michigan.



Each of the twenty groups reproduced above was made by ten consecutive shots with Winchester .22 Long Rifle Lesmok cartridges. The shooting was done with a rest at twenty-five yards. The groups as shown here are one-half actual size.

Every group can be covered with a dime

THE twenty groups of ten shots each shown on the card above, were made at twenty-five yards with Winchester .22 caliber Long Rifle Lesmok cartridges.

The ammunition for this test was picked at random from different factory lots, manufactured during different months, and on different machines throughout the plant.

Each one of the groups in its original size can be completely covered by a ten-cent piece. Every one of these two hundred shots would have struck the base of a .22 caliber cartridge shell placed in the center of the group.

This test demonstrates not only the extreme accuracy of this particular cartridge,

but the absolute uniformity of manufacture from month to month throughout the great Winchester plant.

All types of Winchester ammunition, from the smallest .22's to the most powerful big game cartridges, receive the same care in manufacturing, the same rigid series of inspections, and the same practical tests of performance.

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