

ARMS AND  
THE RIFLEMAN  
OF AMERICA

EYES AND SOME AMMUNITION  
UNITED STATES ARMY OF OCCUPATION IN SMALL  
ARMS COMPETITION  
SOME OLD TIMERS, VINTAGE 1864  
CONCERNING NATIONAL GUARD TEAMS  
EDITORIALS and  
THE LATEST NEWS OF RIFLE, REVOLVER AND  
SHOTGUN; THE ARMY, NAVY AND  
THE NATIONAL GUARD

VOL. LXVI, No. 16



JULY 12, 1919



# THE FINEST TOOL

for the

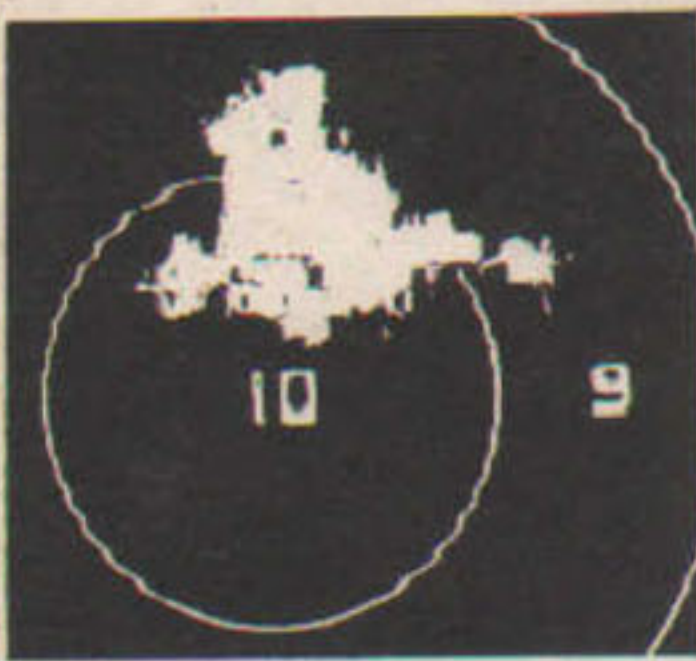
# FINEST WORK



25 Yards—10 Shots, 1/2-inch bull, by Marine Gunner J. L. Renew, U. S. M. C.



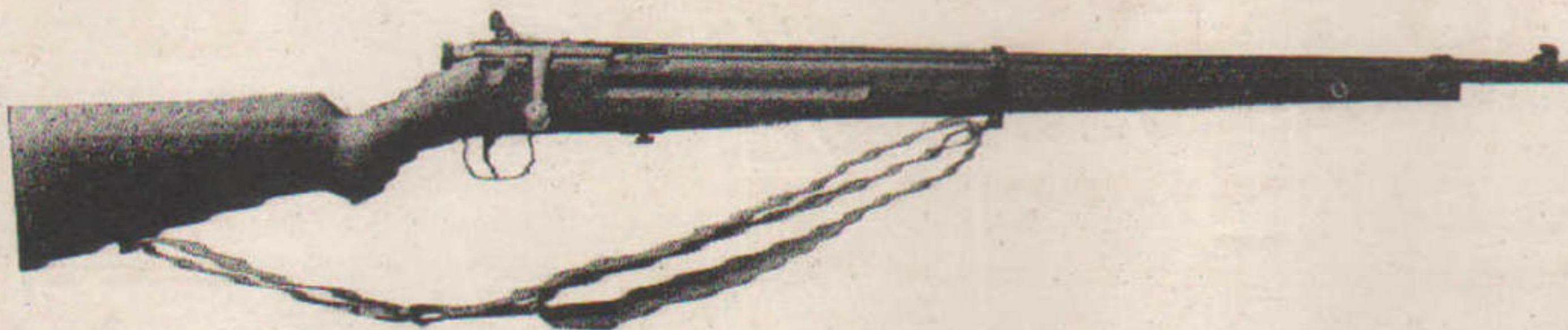
25 Yards—10 Shots, 1/2-inch bull, by Gunnery Sergeant Peter Lund, U. S. M. C.



50 Yards—9 Shots, 1-inch bull, by Marine Gunner J. L. Renew, U. S. M. C.



50 Yards—10 Shots, 1-inch bull, by Marine Gunner John J. Andrews, U. S. M. C.



FOR years you have been asking for a serious rim-fire repeating rifle—a rifle expressly designed as an understudy for the Service rifle—not a patched-up single-shot make-shift.

Here is a bolt-action .22 repeater whose outlines, operation and handling follow those of the new Springfield, the finest military rifle of the world.

Here is an instrument of precision whose barrel gives you a gilt-edge accuracy that owners of special hand-made-to-order barrels will envy.

Here is a rifle that gives you every fraction of an inch, on the target or on game, that your holding calls for, that helps your holding by the most modern, best defined, most easily and accurately adjustable sights, and that gets your shot into the target as though you wished it there, the adjustable trigger-pull is so clean and crisp, and the cleverly designed and proportioned firing mechanism makes ignition so instantaneous.



100 Yards—10 Shots, 4-inch bull, by Marine Gunner J. J. Andrews, U. S. M. C.



100 Yards—10 Shots, Machine Rest. Group, 1.85"; Mean H. D., .65"; Mean V. D., .55" Mean R. D., .56.

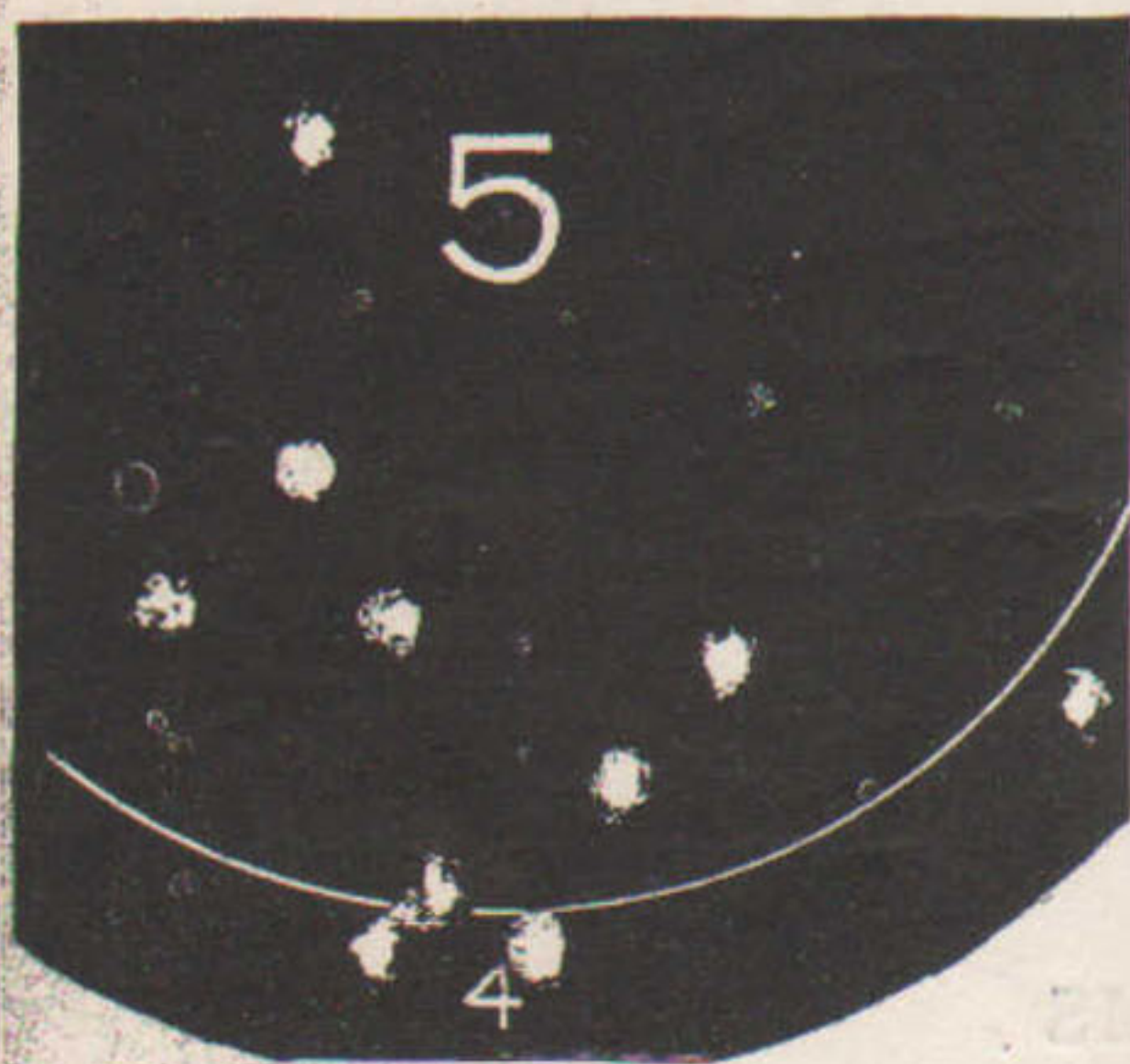
The .22 Savage Model 1919 N. R. A. rifle is specially intended for National Rifle Association .22 calibre competitions. It is the result of many years' experiment and development, and of criticisms and suggestions from the finest small-bore rifle-shots of the world.

It permits the same positions, the same manner of functioning, the same time-intervals between shots and for reloading, as the Service rifle. In fact, it permits the same match conditions as the Service rifle in every detail except range. It will make National Rifle Association small-bore work a true school of the Service rifle.

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150 Yards—10 Shots, 4-inch bull, Marine Gunner J. J. Andrews, U. S. M. C.



150 Yards—10 Shots, 4-inch bull, Capt. E. L. Mullaly, U. S. M. C.

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200 Yards—5-inch Sighting bull. Left, 10 Shots, Marine Gunner J. J. Andrews, U. S. M. C. Right—10 Shots, Marine Gunner Otto Wiggs, U. S. M. C.





# ARMS AND



# THE MAN

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## Eyes and Some Ammunition

By **CAPT. EDWARD C. CROSSMAN, U. S. A.**

**T**HERE runneth an old saw, "For every evil under the sun, there's a remedy—or there's none. If there is one, try and find it. If there isn't, never mind it."

This is indeed a deep bit of philosophy, and doubtless kept its author up nights evolving it, but it applies in this case.

The evil, which will become most marked in the merry month of August during a certain camp meeting down at Caldwell, N. J., is the fact that every shot you and I fire—good holders and careful ones that we are—doesn't hit the assigned black spot on the larger white spot that occupies a small and contemptible portion of the landscape at the yon end of the range.

Let me hasten to assure you, before the crowd passes on to the next stand and leaves me flat, that this story is not going to contain a single reference to an X, Y, Q, or P error, and it won't say a word as to the findings of the late Dr. Mann, and that fact alone ought to be a treat in a story that touches on accuracy.

The possible score in slow fire shooting is rare. We'll all of us admit that fact, when the targets are those commonly assigned to the range, the B for mid-range, the C for long range, and the A for 200 and 300.

Taking for granted the fact that some of the chaps essaying the pleasing stunt of putting every bullet into the black—but failing—are good holders, then there must be some reason or reasons back of this. All this screed is for, is to gun around for these reasons and to kick various inviting-looking brush piles that may serve to conceal them from the ordinary passerby.

We've got for the time being to ignore old fussy Boreas. He has, I've no objection to admitting, put his uninvited foot between many a hopeful wight and the Wimbledon Cup, but for the time being we're going to forget him, and dig out the things that make the 12 o'clock and 6 o'clock fours and threes.

Quite evidently there is a combination of things that conspire to keep all the shots of the ten or twenty we fire either from grouping closely enough, or else not grouping in the precise location, to put themselves into the assigned blackened circle on the target which is what wins matches when done.

I admit that for years I laid the blame at the door of eye-sight. I had a child-like and beautiful faith in rifles and ammunition, and a most modest idea of my own ability as a holder and seer. I'm going in this story to cut out any meaning in the word "hold" but the mere mechanical support of the rifle by the hands without more than the minimum movement. Eye sight to direct that mechanical hold, is another thing and is to be considered separately.

Presently experience with ammunition of known highest accuracy, and the aid of the telescope sight began to shake my faith and I began to find out what the old timers of the

machine rests and the factories had known for years.

I began to find that in a rifle of the highest accuracy, according to estimate of those in position to judge, ammunition also of the highest accuracy, aimed by means of a telescope sight, didn't give the shooting I supposed such a combination ought to give, and that belief went to join the one in Santa Claus that I gave up with equal reluctance.

For years we've been fed a pabulum of talk about mean radius of ammunition. Some of us knew how mean radius was obtained, but relatively few riflemen realized what a group really looked like that for instance at 1,000 yards had a mean radius of 10 inches, which is pretty good ammunition. It was and is quite a common idea that the figure merely meant that the shots were nicely arranged 10 inches from a common center, and that the group was like a wheel with a 10-inch spoke—the diameter was merely twice that figure.

After having been in an experimental position in the Army for the past year, and after having just returned from an ammunition test, I am more than ever convinced that this mean radius piffle was evolved to fool somebody—and did it. Mighty few riflemen have any idea of the actual 10-shot group size which is said in the report to have a nice mean radius of only 5 inches at 600 yards. If the rifleman realized that the 5-inch mean radius group, really measured 16 inches from top to bottom, and gave the rifleman just two inches margin at either end to keep in the 20-inch black, then that 5-inch mean radius figure would mean more and impress him less.

So deceiving is this term from the rifleman's standpoint, it might easily mean a group with a shot clear down in the 2-ring, and still show a fair mean radius figure. If the other nine shots were well clustered, the 10th could strike two and a half feet from the point of impact of the others, and completely ruin your score, and yet show fine on the mean radius report.

Even with the present high development of rifles and ammunition, and even taking the arsenal's nicely camouflaged and hand-picked examples of a rifle that is not near so good as they'd have you believe from the samples, the fact remains that the group thrown at either 600 or 1,000 yards averages in size two-thirds the size of the bull's-eye, while at 1,000 yards, the best 150-gr. ammunition made will not consistently stay in the bull's-eye.

It is perfectly true that a ten-shot group will stay in the bull's-eye, may make a group not more than 21 inches across—but try another string and see what happens, and if that does not prove the point, try a third. Unless either the rifle or the ammunition is extraordinary, and more so than any 150-gr. I've seen, a group will speedily appear that will not stay inside the bull's-eye. With the best of this picked and prepared 150-grain match ammunition, the rifleman will



not average more than four to five inches margin for his eyesight and hold, on either side of the group made by the rifle, at 1,000 yards. There is one exception—the “.300 meter” brand of a certain company.

This being as it is, then let's see what he's got to do to make a possible at this range.

First, he's got to arrange the center of impact of that rifle precisely over the center of the bull. If it is not over the center of the bull, then he's using up some of his precious margin, since the least error of eye or of hold, combined with a shot of the group that happens to agree with the error, will throw the bullet out of the black.

Too little attention is paid by the rifleman to this arrangement of center of impact to agree with center of bull. If he could be made to realize that his ammunition is not shooting into the same hole, and that it has a natural error of more than half the bull and often two-thirds, then he'd be more careful to play in the center, and allow a little margin for the inevitable unhappy coincidence of bad pull and shot that happened to be the extreme one of the group, in that direction. All this trouble is because the shooter rarely sees a finished group of 10 shots laid out on a paper target in front of him, and even if he realizes the lack of smallness of the group, he does not grasp the fact that his own group is not being well centered. The most careful plotter of spotting discs into a score-book, is prone to kid himself—to put the little dot and figure nearer to the center than it is. Also there is the very human tendency to err in the exact position of the spotter, as seen by the eye, and translated into the score-book, entirely apart from the optimistic tendency of most shooters in plotting.

Many a score has gone to glory because the rifleman didn't realize the fact that the group was arranged in the upper or lower half of the bull, with the sure result that before the end of the string one or more would fall out or climb out of the sacred black.

Other scores are ruined by too much changing. Particularly is this true at 1,000 yards. The first record shot goes 5 inches below the center of the bull, and the conscientious rifleman changes a minute to offset this. It happened that Mr. Shot was the lowest one in the group that from a machine rest would measure 28 inches from top to bottom, and so when the second shot unhappily turned out to be the high shot of the same 28-inch group, it found that the change was more than enough to let it leap the scanty 4-inch border that would have lain around a perfectly placed group, and go sailing out into the four ring.

Then the panic-stricken shooting person yanks off two minutes, and the next shot goes out the bottom. This is not

imagination, is an old happening, and a likely one any time so long as the best of our service 150-grain ammunition is going to use up from 24 to 30 inches of the 36-inch bull in good shooting rifles, not to mention the groups that use up about 41 inches of a 36-inch bull, and so hold overflow meetings outside in the 4 and 3 rings.

If the rifle is one of these restless tubes that goes straying out persistently toward some o'clock or other during the string, and the rifleman does not know that it has this little habit, then he's due for some purely automatic four's and threes before the fuss is over. A score-book is the first answer, a good book with plenty of plotting space, and room for recording things. Most of these alleged score-books are long on literature but short on sheets for keeping the dope. Personally I can worry along for quite some pages without one instruction as to adjusting my sling, and I could eliminate the wind tables that clutter up the pages on every score-book of my knowledge outside my good old Davisson, although they are not of the slightest use to anybody.

Every one of these affairs is based on your knowing the wind strength, which you never do, and if you're going to guess, you sort o' translate your guess direct to the wind-gauge without resort to a slide rule, table of logs, or set of dice. They are fine for the beginner who doesn't know whether ten miles of wind is a zephyr or a rip-snortin' tornado, and whether ten miles requires ten points or none. What we need is a score-book for say the second-graders who've learned this and merely want plotting and dope-keeping room.

A lot of work on the score-book—the dope book is a whole lot more accurate term—can be done after leaving the firing point, careful study and analysis of the shots and your record of your pull showing whether you've got a “walking barrel” and whether your center of impact was put over the bull as it should have been. Nothing is more exasperating than one of these double-entry book-keepers on the firing line—the sort who stop and take off a trial balance every three shots, and usually find a two-cent error and have to turn back to page one and add that up also to see what the matter is. The shooter can speedily put down the position of his spotter, with a good sharp pencil with hard lead, and he can put down his pull while waiting for the spotter to show up. This also does not mean that he has to use the stub-end of a carpenter's crayon and draw spider webs from the bull out to the edge of the book to identify his shots because he can't get the point of this said crayon into the plotting circle. A sharp pencil is a fine idea to go with the score-book. Making careful record of wind changes usually does not amount to much; what does matter is what that rifle does during

a string that it ought not to do, and what the elevation is for the same conditions. Wind is variable, the rifle after a while becomes a fixed quantity and can be plotted and learned in its tricks and ways.

Therefore the record ought to be of the rifle, not so much your own fool mistakes in judging wind and the penalties thereof as shown by the position of the spotter. Look over the score-book and see whether just as many shots didn't sneak out for elevation as for wind.

So having learned the importance of making the cluster of rather loosely grouped shots from your rifle coincide with the center of the bull, and what changes to make to off-set a walking barrel that will travel out of the bull just as surely as you hold it the same every shot, then you're ready to consider the part played by you in holding. The eye comes later.

Nobody but some poor unfortunate with St. Vitus dance need have any trouble in the actual mechanical steady hold of a rifle in the prone or other steady position. The proper adjustment of the sling, and the correct position, are the primary requisites, with the addition perhaps of just what is meant by steady holding.

The best illustration of what is meant, and of what you are often not doing, is obtained from the use of a telescope sight, the higher in power the better. Many of the sharks, who do not intend to use the telescope in their matches, use it in the early part of the season to improve their holding. The man who fools himself into thinking himself as steady as the oft-quoted rock, finds when he puts the telescope on the rifle that the pointer is busily and tirelessly engaged in traveling over to say two feet of the bull at 1,000 yards, and if the pointer says that thing, then you are doing just that. You can't do it and make scores, for the reasons set forth, and which drag in ammunition to testify.

We find Colonel Whelan stating in his book that the trained marksman can hold into a 6-inch circle at 200 yards. As 1,000 is 5 times 200, then 5 times 6 is thirty, and 30 inches is entirely too free and easy to let the score linger within the 36-inch bull with 28-inch ammunition.

The hold—which means purely the ability to keep the rifle from wobbling around when the aim is being obtained and trigger released—cannot greatly exceed the theoretical angle of the eye, that is an inch per hundred yards. A telescope sight is the sure criterion as to this.

Then, having acquired this “vice-like grip,” to quote Fennimore Cooper, the rifleman has to be sure that he does not disturb it when turning loose the firing mechanism of the rifle, either through nervousness or the feeling that he can

(Continued on page 310)



# U. S. Army of Occupation In Small Arms Competition

*Special Correspondence to ARMS AND THE MAN*

**A**TTRACTING more competitors than even the A. E. F. competitions at Le Mans, France, and offering a program of thirty events with plenty of prize money for the winners, the Third Division, U. S. Army, staged a Competitive Small Arms and Auxiliary Weapons Shoot at Wehr, Germany, June 2 to 16.

The Springfield and the Model of 1917, the army automatic and revolver, the machine gun, and even the 37 mm.—that rapid-firing cannon which the French and our own troops used so effectively against the Hun—all figured in competitive firing. There were matches for individual riflemen and for company teams, regimental teams and divisional teams. There were events where the holders of the grand aggregate scores were rewarded. All in all the shoot at Wehr left little to be desired, even to free rifles and free ammunition.

Major Gen. R. L. Howze, commanding the Third Division, in announcing the competitions placed himself and his staff on record as favoring the competition idea in the development of good service shots. He said:

"The purpose of this competitive shoot is to quicken the interest of all in the very necessary technique of small-arms firing. It is not sufficient that the soldier should only know in a general way the functioning of our small arms. He should know those minute details of material and weather conditions, the knowledge of which distinguishes the expert from the mediocre. If the holding of this shoot will result in the furtherance of such knowledge to an appreciable extent, then its main purpose will have been accomplished, and the effort involved will not have been made in vain."

Scores in the first 15 of the matches staged at Wehr have been announced. They are not so high as those resulting from a National Match in this country, but they show a grade of marksmanship for the average soldier which should be gratifying to the men who are trying to make our fighters an army of marksmen.

The Third Division Rifle Range is located just north of the village of Wehr, Germany, about 15 kilometers west from Andernach, on the Rhine. The firing line is equipped with 36 targets, spaced on 13-foot centers, and permits of firing at all distances up to and including 1,200 yards. The direction of fire is about northeast, insuring good light, and the butts and firing points are connected by telephone.

With such a range at hand, and with the A. E. F. in France preparing for the

Le Mans shoot, the Third Army could see no reason why the great American shooting game should not be played in the land of the conquered Hun as well as in France. Therefore a dozen officers who are enthusiastic riflemen, led by Major J. G. Coxetter, a former Florida shot, started things moving. As a result these officials were named for the matches which were shot between June 2 and 16:

Executive Officer, Col. F. H. Turner, G. S.; assistant Executive Officer and Chief Range Officer, Major J. G. Coxetter, F. A.; Statistical Officer, Lt. Col. M. Pearson, Inf.; Chief Pit Officer, Capt. J. S. Madden, 7th Inf.; Adjutant, Major N. E. Callen, 4th Inf.; Supply Officer, Capt. J. S. Clauson, 9th M. G. Bn.; Ordnance Officer, 1st Lieut. J. R. Booth, 4th Inf.; Signal Officer, 1st Lieut. M. E. Clawson, 5th F. S. Bn.; Surgeon, Capt. J. R. Tippin, M. C., 10th F. A., and Engineer Officer, 1st Lieut. D. McCloud, 6th Engrs.

Following a period of practice which attracted some 2,000 competitors, and which lasted from June 2 to June 7, the first record match was shot June 9. This match, an individual event, calling for 10 shots on the A target at 300 yards. 5 shots sitting and 5 shots kneeling, offered a prize of 250 marks to the winner, 75 marks for second place, and 25 marks for third place. The high 25 contestants in this event included:

Name	Rank and Organization	Score 300 Yds. S. F.
1. Richard, W., Cpl. 75th Co. 6th Mar...		45
2. Platt, Frank, Sgt. Co. E, 7th Inf.....		45
3. Churchwell, Wag. Co. A, 2d Engrs....		44
4. Harrington, A. H., Pvt. 80th Co. 6th Mar. ....		44
5. Wells, T. C., Cpl. Co. E, 5th Mar....		44
6. Allen, J. F., Pvt. Co. E, 9th Inf.....		44
7. Smith, Elmer, Pvt. Co. A, Sup. Tn. 4th		44
8. Elliott, Marshall, Sgt. 1st cl. 4th Engrs.		44
9. Boyle, J. G., Sgt. 1st cl. Co. B, 6th Engrs. ....		44
10. Heidt, Harry A., Pfc. Co. B, 7th Inf..		44
11. Lutynski, Chas., Pfc. Hq. Co. 23d Inf.		44
12. Hamilton, Elmer D., Pvt. Co. M, 23d Inf. ....		43
13. Williams, L. T., Pvt. 97th Co. 6th Mar.		43
14. Grampp, J. A., Pvt. Co. C, 4th Inf....		43
15. Van Lieu, Russel, Sgt. Co. F, 6th Engrs. ....		43
16. Ernig, M. D., Pvt. Co. A, 5th Mar....		43
17. Panter, E. H., Pvt. 84th Co. 6th Mar.		43
18. Smith, A., Pfc. Co. I, 9th Inf.....		43
19. Marksberry, B., Sgt. Co. B, 7th M. G. Bn. ....		43
20. Tate, H., 1st Sgt. Co. C, 38th Inf....		43
21. Vanderslice, C., Cpl. Co. L, 7th Inf...		43
22. Schubert, R. H., 1st Lt. Co. I, 5th Mar.		43
23. Brodsky, Abraham, Cpl. Co. M, 4th Inf. ....		43
24. Derkhammer, O., Pfc. Co. D, 7th Inf..		43
25. Gapinsky, J., Cpl. Co. H, 7th Inf.....		43

Matches No. 2 and No. 3—calling for 10 shots prone, Target B, 500 yards, slow

fire, and 2 sighters and 10 shots for record, Target B, slow fire, prone, respectively—followed the introductory event on June 9. In Match No. 2, Private B. J. Beach, Co. B, Fifth Marines, and Sergeant J. E. Lance, Co. K, Fifth Marines, tied for first honors on a possible score. The winner has not been announced. The twenty-five high competitors in each of these events were:

### RECORD OF SCORES FOR 500 YARDS, SLOW FIRE, MATCH No. 2

*Winners*

First Place:	Score
Beach, D. J., Pvt. Co. B, 5th Marines...	50
Lance, J. E., Sgt. Co. K, 5th Marines...	50
Third Place:	
DeLotal, John, Sgt. 1st cl. 4th Engrs....	49

Note.—Tie for first place will be decided later.

Name	Rank and Org.	Score 500 S.F.
1. Beach, B. J., Pvt. Co. B, 5th Mar....		50
Lance, J. E., Sgt. Co. K, 5th Mar....		50
3. DeLotal, John, Sgt. 1st cl. 4th Engrs...		49
4. Onahus, H., Cpl. Co. G, 47th Inf.....		49
5. Starry, J. R., Pvt. Hq. Co. 4th Inf...		49
6. Hon, Walter J., Sgt. Co. G, 4th Inf..		49
7. Schrader, C. F., Tpr. Co. G, 5th Mar..		48
8. Warren, Chas., Pvt. Co. E, 38th Inf...		48
9. Rack, E. C., 1st Lt. 2d Engrs.....		48
10. Saint, John J. A., Sgt. Co. D, 38th Inf.		48
11. VanDyke, Jacob, Cpl. Co. L, 38th Inf.		48
12. Mahr, Lee, Sgt. Co. F, 5th Mar.....		48
13. Piety, G. E., Pvt. Co. K, 47th Inf....		48
14. Miegham, J. B., Cpl. Co. A, 7th Inf...		48
15. Laughlin, W. H., Pvt. 95th Co. 6th Mar. ....		48
16. Harris, J. G., 1st Lt. 47th Inf.....		48
17. Dimmick, Ira C., 2d Lt. 9th Inf.....		48
18. Coy, G. L., Cpl. Co. F, 5th Mar.....		48
19. Poulton, Peter, Pvt. Co. D, 30th Inf..		48
20. Allen, J. F., Pvt. Co. E, 9th Inf.....		48
21. Platt, Frank, Sgt. Co. E, 7th Inf.....		48
22. Anderson, R. W., Sgt. Co. I, 38th Inf.		47
23. Cooptedge, J. J., Pvt. Hq. 5th Brig...		47
24. Santor, August, Cpl. Co. E, 26th Inf..		47
25. Wagner, E., Cpl. Co. F, 2d Engrs.....		47

### RECORD OF SCORES FOR 600 YARDS, SLOW FIRE, MATCH No. 3

*Winners*

First Place:	Score
Westfall, Carl, Pvt. Co. B, 28th Inf....	48
Second Place:	
Riggins, E., Pvt. Hq. Co. 38th Inf.....	47
Third Place:	
Lee, Richard, Pvt. Co. E, 38th Inf.....	47

Name	Rank and Organization	Score 600 Yds. S.F.
4. Finney, W., Cpl. 76th Co. 6th Mar....		47
5. Snyder, Geo. W., Ord. Sgt. 4th Engrs.		47
6. Barrett, O. D., Pvt. 76th Co. 6th Mar..		47
7. Williams, H. N., Pvt. Co. K, 5th Mar.		47
8. Ernig, M. D., Pvt. Co. A, 5th Mar....		47
9. Griffin, W. D., Sgt. Co. L, 23d Inf...		47
10. Lawson, T. M., Sgt. Co. I, 7th Inf....		47
11. Fultz, C. G., Pvt. Co. G, 5th Mar....		47
12. Lukwitz, W., Sgt. Co. A, 3d Am. Tn..		47
13. Johnson, J. H., Pvt. Co. K, 5th Mar.		46
14. Knife, B., Cpl. Co. G, 30th Inf.....		46
15. Slagel, Bert V., Pvt. Co. L, 4th Inf..		46
16. Brooks, Edw., Cpl. Co. E, 3d Am. Tn.		46
17. Monroe, R. A., Capt. 4th Engrs.....		46
18. Schubert, R. H., 1st Lt. Co. I, 5th Mar.		46
19. Olson, M., Pvt. Co. F, 6th Engrs....		46
20. Alt, G. J., Cpl. 47th Inf.....		46
21. Englas, Walter, Cpl. Hq. Co. 23d Inf.		46
22. Schroeder, R., Cpl. Co. L, 16th Inf...		46
23. Crosek, J., Pvt. Co. F, 30th Inf.....		46
24. Barnett, L., 1st Sgt. Co. B, 8th M. G. Bn. ....		46



25. McNally, D. O., Sgt. Co. F, 2d Engrs. 46

Match No. 4, for individual riflemen, called for the aggregate scores of Matches 1, 2 and 3, and carried prizes of 350 marks for first place, 100 marks for second place, and 50 marks for third place. The high 25 competitors in this event included:

RECORD OF SCORES IN MATCH No. 4

Winners

First Place:	Score
Cullar, E. V., 1st Sgt. Co. F, 2d Engrs..	135
Second Place:	
Onahus, H., Cpl. Co. G, 47th Inf.....	134
Third Place:	
Harris, J. G., 1st Lt. Co. A, 47th Inf..	134
Fourth Place:	
Ernig, M. D., Pvt. Co. A, 5th Mar.....	134

Note.—Owing to the rule in the program prohibiting an officer from receiving a cash prize, cash prize for third place will go to Pvt. Ernig.

Name	Rank and Organization	Total Score
1. Cullar, E. V., 1st Sgt. Co. F, 2d Engrs.		135
2. Onahus, H., Cpl. Co. G, 47th Inf.....		134
3. Harris, J. G., 1st Lt. Co. A, 47th Inf.		134
4. Ernig, M. D., Pvt. Co. A, 5th Mar...		134
5. Starry, J. R., Pvt. Hq. Co. 4th Inf...		134
6. Olson, M., Pvt. Co. F, 6th Engrs.....		133
7. Panter, E. H., Pvt. 84th Co. 6th Mar.		133
8. Platt, Frank, Sgt. Co. E, 7th Inf.....		133
9. Coy, G. L., Cpl. Co. F, 5th Mar.....		133
10. Piety, G. E., Pvt. Co. K, 47th Inf....		133
11. Monroe, R. A., Capt. 4th Engrs.....		132
12. Alt, G. J., Cpl. 47th Inf.....		132
13. DeLotal, John, Sgt. 1st cl. 4th Engrs.		132
14. Schroeder, R., Cpl. Co. L, 16th Inf...		131
15. Iverson, O., Sgt. Co. C, 47th Inf.....		131
16. Welsh, E. A., Capt. 58th Inf.....		131
17. Slagel, Bert V., Pvt. Co. L, 4th Inf..		130
18. Schubert, R. H., 1st Lt. Co. I, 5th Mar.		130
19. Engles, Walter, Cpl. Hq. Co. 23d Inf.		130
20. Vinnie, Martin, Sgt. Co. H, 23d Inf..		130
21. Zeller, L. J., Sgt. Co. M, 47th Inf....		130
22. Smith, Carl, Cpl. Co. E, 30th Inf.....		130
23. Myers, Heff E., Pvt. Co. B, 7th Inf...		130
24. Meigham, J. V., Cpl. Co. A, 7th Inf..		130
25. Grampp, J. A., Pvt. Co. C, 4th Inf....		130

Rapid-fire events, scheduled as Matches 5, 6 and 7, followed on June 10. Match No. 5 called for rapid fire, 200 yards, 10 shots, Target D, time 60 seconds; position, sitting or kneeling from standing. The first prize offered was 200 marks, the second prize 50 marks, and the third prize 25 marks.

Match No. 6 called for rapid fire, 300 yards, 10 shots prone from standing, Target D, 70 seconds. The first prize was 200 marks, the second prize 50 marks, and the third prize 25 marks.

Match No. 7 called for rapid fire, 500 yards, 10 shots, Target D, 80 seconds, prone. The first prize was 250 marks, the second 100 marks, and the third prize 50 marks.

Match No. 8, like match No. 4, called for the aggregate scores in the three preceding matches. For the first prize, 350 marks was offered, for the second 100 marks, for the third 50 marks, and for the fourth 25 marks.

The high 25 competitors with their scores in all three matches were:

1. Harris, J. G., 1st Lt. 47th Inf., 200 yards, R. F., 49; 300 yards, R. F., 48; 500 yards, R. F., 46. Total score, 143.

2. Clay, R. F., Cpl. Co. B, 1st Engrs., 200 yards, R. F., 48; 300 yards, R. F., 49; 500 yards, R. F., 43. Total score, 140.

3. Cullar, E. V., 1st Sgt. Co. F, 2d Engrs., 200 yards, R. F., 47; 300 yards, R. F., 49; 500 yards, R. F., 43. Total score, 139.

4. Nickels, C. E., Sgt. Co. D, 2d Engrs., 200 yards, R. F., 49; 300 yards, R. F., 48; 500 yards, R. F., 42. Total score, 139.

5. Marlow, C. H., Wag. Sup. Co. 26th Inf., 200 yards, R. F., 49; 300 yards, R. F., 49; 500 yards, R. F., 41. Total score, 139.

6. Lukwitz, W., Sgt. Co. A, 3d Am. Tn., 200 yards, R. F., 47; 300 yards, R. F., 45; 500 yards, R. F., 46. Total score, 138.

7. Welsh, E. A., Capt. 58th Inf., 200 yards, R. F., 44; 300 yards, R. F., 49; 500 yards, R. F., 45. Total score, 138.

8. Piety, G. E., Pvt. Co. K, 47th Inf., 200 yards, R. F., 49; 300 yards, R. F., 45; 500 yards, R. F., 44. Total score, 138.

9. Denton, J. B., Pvt. Co. B, 6th Engrs., 200 yards, R. F., 46; 300 yards, R. F., 47; 500 yards, R. F., 44. Total score, 137.

10. Williamen, B. W., Pvt. Co. K, 47th Inf., 200 yards, R. F., 47; 300 yards, R. F., 47; 500 yards, R. F., 43. Total score, 137.

11. Miller, Wm. J., Pvt. Co. G, 4th Inf., 200 yards, R. F., 46; 300 yards, R. F., 48; 500 yards, R. F., 42. Total score, 136.

12. Osterbind, O. S., Sgt. Co. E, 4th Inf., 200 yards, R. F., 46; 300 yards, R. F., 50; 500 yards, R. F., 40. Total score, 136.

13. Irving, John, Sgt. Co. E, 1st Engrs., 200 yards, R. F., 44; 300 yards, R. F., 46; 500 yards, R. F., 45. Total score, 135.

14. McNally, D. O., Sgt. Co. F, 2d Engrs., 200 yards, R. F., 46; 300 yards, R. F., 46; 500 yards, R. F., 43. Total score, 135.

15. Crisco, E., Pvt. Co. H, 47th Inf., 200 yards, R. F., 45; 300 yards, R. F., 47; 500 yards, R. F., 43. Total score, 135.

16. Porter, John, Sgt. Co. D, 16th Inf., 200 yards, R. F., 47; 300 yards, R. F., 46; 500 yards, R. F., 42. Total score, 135.

17. Bridge, J. B., Pfc. Co. H, 47th Inf., 200 yards, R. F., 48; 300 yards, R. F., 46; 500 yards, R. F., 41. Total score, 135.

18. Monroe, R. A., Capt. 4th Engrs., 200 yards, R. F., 47; 300 yards, R. F., 47; 500 yards, R. F., 41. Total score, 135.

19. Mitchell, J. N., Pvt. 96th Co. 6th Mar., 200 yards, R. F., 48; 300 yards, R. F., 47; 500 yards, R. F., 40. Total score, 135.

20. Smith, Elmer, Pvt. Co. A, 4th Sup. Tn., 200 yards, R. F., 48; 300 yards,

R. F., 47; 500 yards, R. F., 40. Total score, 135.

21. Rippey, Delmar, Cpl. 16th Co. 5th Mar., 200 yards, R. F., 50; 300 yards, R. F., 48; 500 yards, R. F., 37. Total score, 135.

22. Williams, L. T., Pvt. 97th Co. 6th Mar., 200 yards, R. F., 47; 300 yards, R. F., 42; 500 yards, R. F., 45. Total score, 134.

23. Shipley, Geo. J., Maj. 23d Inf., 200 yards, R. F., 48; 300 yards, R. F., 44; 500 yards, R. F., 42. Total score, 134.

24. Herrich, O. N., Pvt. Co. F, 5th Mar., 200 yards, R. F., 49; 300 yards, R. F., 44; 500 yards, R. F., 41. Total score, 134.

25. Morrison, W. L., Capt. 38th Inf., 200 yards, R. F., 45; 300 yards, R. F., 49; 500 yards, R. F., 40. Total score, 134.

The first of the long range matches was No. 9, shot at 1,000 yards on June 10, and although even the snipers seldom find opportunities to line their sights at such a distance, the doughboys were not daunted but tackled the job just as they had tackled the more familiar battle ranges. The 1,000-yard match called for two sighters and 10 shots for record; position prone, target C, modified. As used in the competition the regulation long range paper was cut down to a six-foot square size. This removed that portion usually counting "2." Otherwise the target was not altered. The prizes in this competition paid 400 marks for first, 100 marks for second and 50 marks for third. The twenty-five high contestants in this competition were:

RECORD OF SCORES FOR 1,000 YARDS, SLOW FIRE, MATCH No. 9

Winners

First Place:	Score
Rigney, T. E., Cpl. Co. B, 2d Am. Tn...	41
Second Place:	
Churchwell, Wag. Co. A, 2d Engrs.....	40
Third Place:	
Vincient, D. O., Cpl. Co. F, 1st Engrs...	40

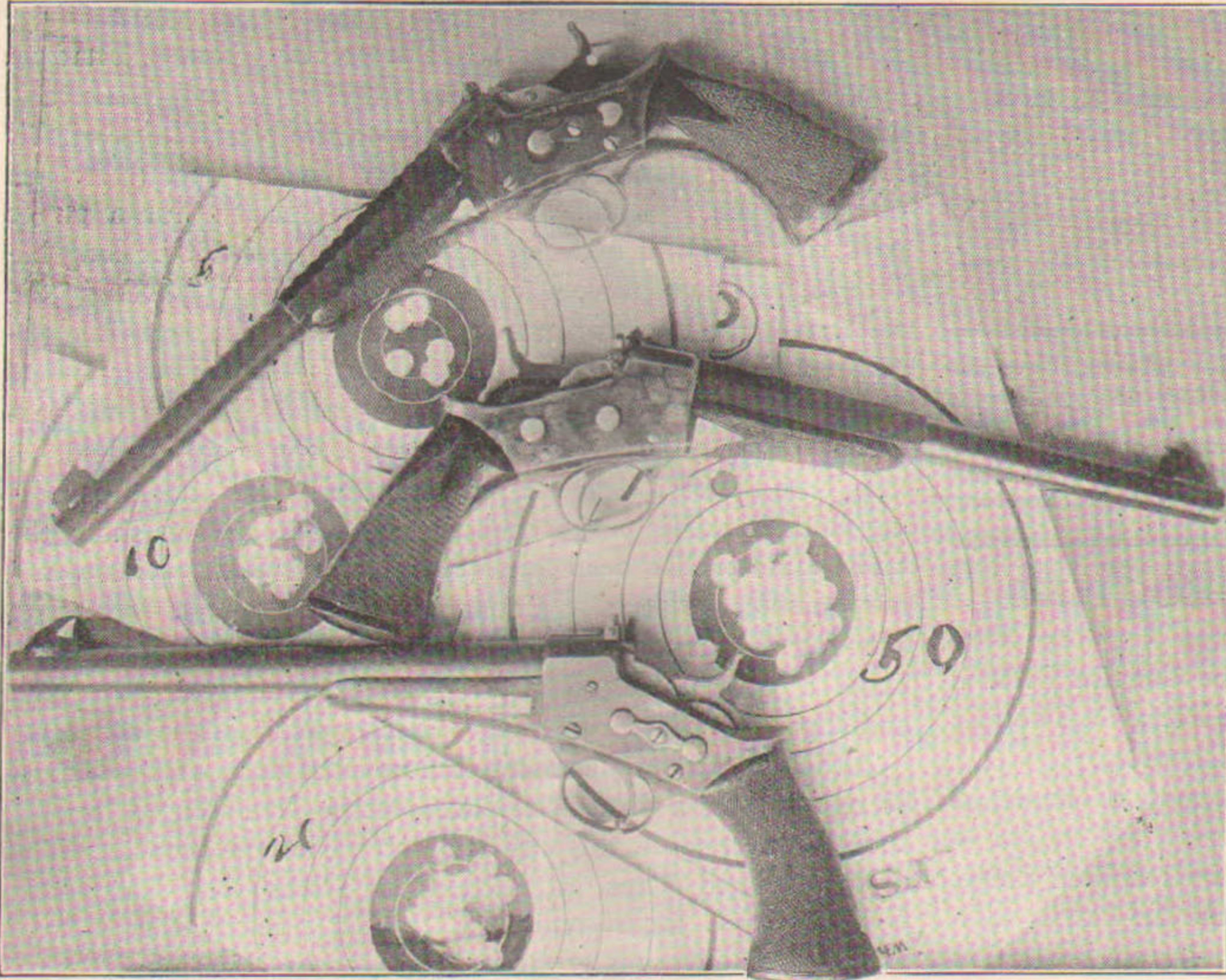
Name	Rank and Org.	Score 1,000 yds. S.F.
4. Mitchell, J. N., Pvt. 96th Co. 6th Mar.		37
5. Rosenbam, A., Capt. 4th Am. Tn.....		37
6. Randall, A. F., Pvt. 76th Co. 6th Mar.		35
7. Sexton, D., Sgt. Sup. Co. 38th Inf....		34
8. Dimmick, I. C., 2d Lt. 9th Inf.....		34
9. Boyce, E., Pvt. Co. A, 7th Inf.....		34
10. Duhanois, E., Sgt. Co. I, 26th Inf.....		34
11. Harrington, A., Pvt. 80th Co. 6th Mar.		33
12. Emig, M. D., Pvt. Co. A, 5th Mar.....		32
13. Fadden, E. I., 2d Lt. 83d Co. 6th Mar.		32
14. Halyburton, E. M., 1st Sgt. Co. F, 16th Inf. ....		32
15. Ballard, O., Pvt. Co. A, 4th Inf.....		31
16. Mudd, L., Sgt. Co. A, 2d Engrs.....		31
17. Hughey, G. E., Cpl. Co. M, 23d Inf...		31
18. VanDyke, J., Cpl. Co. L, 38th Inf.....		31
19. Moore, R. E., 1st Lt. 9th M. G. Bn...		31
20. Baldwin, A. E., Cpl. Co. A, 58th Inf.		31
21. Lackie, J. B., Pvt. Co. L, 7th Inf....		29
22. Hensley, B. F., Pvt. Co. B, 9th Inf...		29
23. Kruse, C. H., Pvt. 74th Co. 6th Mar.		29
24. Wagner, E., Cpl. Co. F, 2d Engrs.....		29
25. Hyatt, F. H., Sgt. 74th Co. 6th Mar...		29

(Continued on page 316)



# Some Old Timers, Vintage 1864

By CAPT. "TACKHOLE" LEE



Top, .44 Russian; center, .22 Long Rifle; bottom, .44 S. & W. Special Neidner. Targets: Composites of first 5 shots, first 10 shots, first 20 shots and entire 50 shots in 1919 U. S. R. A. Indoor Match 1919.

RECENTLY some very remarkable shooting pistols came into my hands. That's putting it very mildly, too. The photograph shows some of the weapons I speak of. There is likewise a reproduction, actual size, of some targets made with the .44-calibre Russian. Nuf sed! And then some.

The .22 Remington and the .44 Remington are twins as to balance, trigger pull, etc. The .44 is chambered for the Russian cartridge, which a great many of the experts consider the most accurate of the .44 family. This gun made some extremely fine targets at 20 yards from machine rest, the bullets going almost in the same hole for 5-shot strings—fine work for a good rifle, if you please.

One arm I have is the old Remington action with a barrel made and fitted by Neidner, chambered for the .44 S. & W. special. This likewise is a wonderful shooter. They are all fitted with checkered grips and fore ends and have 10-inch barrels.

Another is the same old Remington action with a .22-calibre barrel fitted and made by Peterson of Denver. It shoots as accurately as a rifle practically—certainly shoots a great deal better than any human being will ever be able to hold it shooting off-hand.

These old-timers are heavy. To the

pistol shooter accustomed to the lady-like feel of the little S. & W. single-shot .22 pistol, they feel awkward at first and tire the holding arm quickly. Just a matter of practice and training though, when the arm will soon be able to hold them for 100-shot strings. Mainly on account of their greater weight, they can be held much steadier than the light arms. The movement of the sights on the target is slower, without fluttering or trembling, and closer shooting can be done than with the light arms.

The first week or two I began using them my work was poor. The first ones I saw were sent me by Dr. Hertzler. I finally persuaded him to sell me the .44 S. & W. Neidner, and after playing with another pair he owned a while, I returned them to him, as he values them at a million dollars each he says. I value mine the same and they're not for sale, if you please. After a week or so my arm began to harden up to the extra weight and scores began to improve. I have shot nothing else for the past five months in the way of a pistol and am off anything else permanently in the large calibres. The .44 is my especial favorite. It's equally as accurate as the .22, and the big hole cut by that wad-cutter bullet adds points, and a lot of them, in a 50-shot match!

The .44 S. & W. special Remington

with the Neidner barrel was used in the 17 matches of the U. S. R. A. league for 1919, with an average of 94.68 per cent.

All these pistols are fitted with Partridge form sights. The front blades sharply relieved, to give clearer definition. Trigger pulls are ideal—just far enough over the legal limit to be perfectly safe in passing the weighing test. Two and a half pounds is good on these and seems about like two on the lighter pistols.

I understand the American navy, what there was of it at that time, was armed with this old pistol along about 1864. The action is very simple and yet strong enough to withstand several times the pressure developed by the factory loads. Owing to the weight, the full charge can be fired long strings without inconvenience or injury to wrist or hand.

If these pistols were on the market now, they would prove popular, but the Remington-UMC company no longer makes them and will not make them. The Remington works at Ilion, N. Y., formerly turned them out. Wherever you find a gun crank with one or more in his possession, he treasures them on a par with his finest guns—and "not for sale" is the sign hung out.

Among shooting friends owning some of the old Remington pistols like these are Dr. Hertzler, A. F. de Funiak and J. W. Beeler. They are scarce, which may account for their unusual value, but in my own humble opinion, from the standpoint of a target shooter, mine are valuable because they are reliable, accurate, fool-proof, and feel mighty good in my hand. Even if Remington of Ilion did make them fifty or so years ago, they are high-class examples of American gunsmithing and hold their own with any of the later products of United States gunmakers, and I'm now rising clean up on my hind legs and stating fervidly that I swear by 'em.

## CONCERNING NATIONAL GUARD TEAMS

Additional information for the benefit of National Guard teams attending the National Matches is published as follows by the Militia Bureau:

For the further information of State authorities and members of National Guard teams participating in the National Rifle Matches beginning on August 25, 1919, at Caldwell, New Jersey, the following regulations affecting such teams are published in addition to the details given in Bulletin 18, War Department, May 19, 1919:

1. The seventeen members of each National Guard team, as specified in Bulletin 18, shall be appointed by the governors of the respective States from the active officers and enlisted men of the National Guard of such States, and announced in formal orders:

(Concluded on page 315)



# ARMS AND THE MAN

1111 WOODWARD BUILDING, WASHINGTON, D. C.

EVERY SATURDAY

Editor

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

Associate Editor

KENDRICK SCOFIELD

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

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

## PUBLIC PARKS AND THE SHOOTING GAME.

IT IS gratifying to learn that in the Roscoe Conklin Park in Utica, N. Y., and in the beautiful Pinafore Park, St. Thomas, Ontario, tracts have been set aside for trapshooters.

This should establish a precedent which may be made of great value to the shooting game generally.

It is true that the scattergun by reason of its limited range, and the fact that the pellets which shatter the tar-hawks soon expended their energy, is better adapted for use in a recreation park than a high-power military rifle, which fact may to a great extent account for the popularity of trapshooting. Nor is it possible that in more than a very few isolated cases will it ever be found feasible to set up rifle ranges for full-charge weapons in any city park. But it is feasible and practicable to build miniature ranges for the .22-calibre rifle, and to so safeguard them that there will not be the slightest danger to the citizens of any community wherein a public park rifle range may be

established. The organization of the small-bore shooting game on a standardized basis, as emphasized in the miniature range program which will be run off at the National Matches this year, will mean that if every State in the Union is represented at the matches by one or more teams, as at this time seems likely, that to each State will return seventeen or thirty-four men, as the case may be, each one of whom has had an opportunity to see how the small-bore game will work, and who will have become acquainted with the possibilities of this form of marksmanship for good clean outdoor sport. If each of these men undertakes to stir up enthusiasm for a public park rifle range in his own locality, it should not be long before many such ranges will have sprung up through the country. The miniature range can be constructed at little expense, and with a certainty of confining the low-power bullets to a restricted area, and a park rifle range should in no particular be more dangerous than a park trapshooting field.

In both the establishment of miniature ranges and trapshooting fields in public parks, easily accessible to citizens shots, the United States has been lamentably behind Great Britain and her colonies—especially Canada. It is time that the entire shooting fraternity—scattergun and rifle enthusiasts alike—make a determined effort to establish municipal traps and municipal miniature rifle ranges in every city in the country.

Although the establishment of municipal traps in Utica must be regarded as a distinct achievement in developing a love of shooting as a sport, this city is by no means the pioneer. The first municipal traps in the United States were located in Nichols Park, Jacksonville, Ill. Other cities that now have public park shooting grounds are Spokane, Wash.; Chicago, Ill.; Springfield, Ill.; Kansas City, Mo.; and Omaha, Neb. Milwaukee, Minneapolis, Cleveland, Scranton, Wilkes-Barre and New York have talked over public traps at various times, but no headway seems to be made. Chicago has traps in Lincoln and Washington Parks. The new club house in Lincoln Park was erected at a cost to the shooters of \$20,000. To offset this the Park Commissioners spent \$40,000 for landscaping the grounds.

## Little Talks About The National Matches

By CAPTAIN E. C. CROSSMAN

THE Frankford Arsenal is sending down to Caldwell for test a number of thousand M. 1906 cartridges loaded with the American version of the Swiss boat-tail bullet, weight 180 grains. These will be tried out for results in the matches and the results used by Frankford in their experimental work with this type of missile. Some 800 regular Swiss bullets were sent from the Frankford Arsenal to Colonel Wilhelm, down at the experimental firing station at Miami, Florida, and were fired by him. He reported greatly reduced time of flight, with of course resultant decrease in elevation required, flattening of the trajectory, and less sensitiveness to wind. The result was the making by the arsenal of

regular 180-grain boat-tail bullets along precisely the same lines as the Swiss. The writer of this screed will be in possession of a supply shortly and will then go into them farther.

Several yeras ago Major Moody, Ordnance, then at Rock Island, sent to the writer several hundred of the Swiss bullets for test. They cut down the elevation required by a considerable extent, but gave occasional fliers at 1,000 yards. The writer went into the question in several issues of ARMS AND THE MAN in years gone by. If they can be made to shoot, the bullet will be a step ahead in the development of our ammunition. The French bullet we know can be made to shoot, and a certain factory-made

French war ammunition that considerably outshot the best of our own war ammunition for the 1906 rifle.

\* \* \*

The grand old State of "Ioway" has picked its civilian rifle team for the National Matches of 1919, and writes that they are thusly:

Veterans of former matches:

M. A. Fawcett, H. W. Sellers, R. A. Fuller, Don W. Price, E. E. Stanley, and B. G. Simms.

The newcomers are A. R. Swartz, C. D. Robinson, H. S. Arrasmith, W. L. Moore, E. J. Caton, J. R. Ziegler, H. H. Montillon, Paul Huston, while the officers are: captain, D. A. Preussner; coach, Thos. Sutherland; quartermaster, D. E. Boots.

The tryout was held up at Camp Dodge, and the eats and sleeps were furnished by Col. M. C. Mumma and his stupendous aggregation of horse-wrestlers gathered at that point to make up the Cavalry rifle team, likewise including the doughboys, who are also at



Dodge, but of course are mere pedestrians in the human scale of things.

Each of the civilians trying for the team was assigned one of the cavalry or infantry officers competing for the service teams, and was likewise assigned said officer's rifle, which is the height of hospitality, by thunder. Fifty-two of the Iowa non-military persons entered the competition.

Morton Mumma, Jr., the good-looking and husky youngster who was familiar to the gathering at Perry in 1918, missed making the Iowa civilian team by two places in spite of having a fine infected trigger finger, and may land it yet.

\* \* \*

There blew in at the rifle and ammunition trials down at Sea Girt, July 3d, no less a person than John Hessian, of the Remington layout, and fresh from France and England. He visited the small-bore matches of the Ham and Petersham (wonder if Petersham is some kind of egg) Club in England, and tells an interesting story of their smooth-working system and the huge interest taken in the game. One of their peculiar kinks that we shall have to cut out this year is the use of double targets, one about 6 inches ahead of the other, screen style. If you shoot over on Bill Crab's target and slip Bill a juicy 6 in a score that was all 10's to that time, you don't lie and chuckle and encourage Bill to swear still more. Not you, after the range officer investigates and finds the line of fire through those two targets and traces it to you. It costs you one "shullin'," which is all the same as a dollar and a half in England, if you have to earn it.

John Hessian shot through the A. E. F. competitions at Le Mans "just for fun," not being eligible to compete. The results indicate that John was the only one to see the fun. High man in the A. E. F. competition made 812. John scored 875, which sort o' crabs the winner's glory.

\* \* \*

The Adjutant General of New York sends out a circular letter announcing that all New York civilians who'd like to go down to Caldwell will be invited to foregather at a date to be announced and there shoot it out. All persons, schools, clubs, civilians, and regular human beings can secure information as to dates of tryouts by writing to said Adjutant General. The tryout will be held at Peekskill, N. Y.

\* \* \*

Colonel Mumma writes that the Cavalry have had their first elimination and boiled down all who couldn't make 1,000 in four times over the National Match course, the grand result being the lessening of the Cavalry attendance from about 100 down to 63. The well-known axe swings again July 15th, when all but 30 yellow-cords will be inquiring about trains out of Camp Dodge. Colonel

Mumma wants to hear from any cavalrymen with asbestos backs and tummies, the ordinary kind not standing the wear and tear of the Iowa midsummer weather, which is some weather according to the Colonel. High cavalryman scored 1,132 for the four trials over the course, which figures out 282 for each course, and 94 per range. Is Colonel Fay, of the Marines, in the house?

\* \* \*

#### OUR ANSWERS TO QUESTIONS DEPARTMENT

*Edited by I. D. Unno*

No, there are no mosquitoes at Caldwell, but there are a few errors of mortal mind that buzz and bite much like mosquitoes.

Clothes and Bedding—I've made six trips to the range from the balmy summer resort of Washington, D. C. Thus far I've left Washington just one garment ahead of arrest for indecent exposure, and nearly froze before I got out to the range the next morning by automobile. Wherefore let the wise rifleman bring along plenty B. V. D.'s for ordinary wear, which will, I think, be indicated by the weather in August; but also not forget one suit of the good old well-known wool underclothes, and something in the coat line like a mackinaw. This can be left off in hot weather, but if it is home it will be somewhat difficult to slip on if she turns cold.

It is a safe bet to bring along two sheets and three blankets. I know that sheets are a tenderfoot luxury, but in some Eastern nights a sheet is all the bedding one wants, and the thought of a blanket brings on profuse perspiration. The Government furnishes the cots, but *not* the bedding. No law against bringing a slicker.

The range is about 20 miles from New York, but this does not mean running in after supper for an ice-cream soda. The way is a devious one, and the time is about like this: Range to Caldwell, 4 miles, about 15 minutes; Caldwell to Newark, about 10 miles, 50 minutes by trolley; Newark to the big city, about 25 minutes; total, one and a half hours, not including waits for cars. The fare isn't as bad as the time, being 33 cents for round trip, Newark to New York; Caldwell to Newark, 14 cents each way. Free busses will run from the range to Caldwell, so the fare will amount to 61 cents round trip, unless one has to take jitney to Caldwell instead of the free bus.

\* \* \*

Gen. Joseph A. Storch has been appointed team captain of the Nebraska Civilian Rifle Team, according to a note received from Capt. Lincoln Riley, of the Wisner Rifle Club.

\* \* \*

One more Gob rifle team is scheduled for the National Matches, this one being the Blue Jacket outfit from the U. S.

Naval Training Station at Hampton Roads. A letter from Capt. C. F. Macklin, well known to Southeast coast rifle shooters, conveys the good news. It is possible that Captain Macklin may bring up the team himself.

\* \* \*

Colonel Harlee hopes to assign to every civilian and school rifle team at the big shoot an expert non-commissioned officer from the Marines or the Navy, as long as the supply holds out, the service man to help coach and act as old hen to the newly fledged rifle shots who may be on the team.

\* \* \*

Mississippi will send up a civilian team, made up mainly from the Gulf Coast Military Academy. Major J. T. Clements, instructor at the Academy, is organizing the team and may come as the captain.

\* \* \*

The sage-brush is to give up a rifle team—and rifle teams from the same sage in days gone by have given the curried and effete persons on other teams some rude jolts when it came to the shooting match. Nevada's Adjutant General, M. J. Sullivan, writes that they are going to send a civilian rifle team and that he will come with it to make sure that the Easterners pull off no razzle-dazzle on the innocent Nevadans.

\* \* \*

A letter from the Militia Bureau of the War Department has been sent to all Adjutants General directing their attention among other things to the provision that the principals of a rifle team means shooting members, and that therefore the provision that not less than six members of a team must be men without previous National Match experience ought to be applied also to the alternates, lest some of them also be called on to fire and the team become ineligible because of their status as experienced competitors.

\* \* \*

The American Trapshooting Association, which will control the trapshooting at the Caldwell range, is going to schedule its proficiency medal shoots all during the National Matches. These shoots give the shooter a chance to get bronze, silver and gold medals by shooting so many scores and turning in so many points for the scores which run over the minimum. For instance, for the 75 per cent medal, 10 scores of 38 x 50 or better; 80 per cent, 10 scores of 40 x 50 or better, etc. They get really good when they get to giving away gold medals, the 95 per cent medal requiring 30 scores of 48 x 50 or better. In ordinary walks of life it would cost the poor wight seeking one of said 95 per cent medals just \$60 for shells and \$30 for birds, even if he managed to keno every time he tried for the little old 48 x 50, which isn't commonly done. Both Rockefeller and Morgan have won these medals, while Jay Gould has got half his scores and is going strong.



**EYES AND AMMUNITION.**

(Continued from page 304)

let down, that his work is over when the scar slips. Many a score has been ruined by just this little tenth-second of quitting cold, which is what it amounts to, and many men do this persistently without knowing it. The one way to avoid it, is to make yourself retain the aim for a full second after the striker falls, in "dry practice," and try to retain it during the explosion in actual firing. You cannot, of course, but the effort to keep the rifle sights on when the gun is fired, does away with the too-early let go of all "holts" practiced by too many riflemen.

With the mechanical part of the hold worked out to its highest stage, then the next question is the eye—whether or not you're seeing the sight in relation to the bull the same each shot or whether you're varying half the height of the bull from shot to shot. It is the feeling that you are doing this latter stunt, and the removal of all the trouble in seeing clearly with the telescope sight, that leads to riflemen adopting it for target shooting, when often they'd be better off without it and its complications and uncomfortable position.

I want to tell you about the one sure

way of getting down to brass tacks as to the error of the eye when using metallic sights, and what careful tests have shown in the past.

For years the Army has used the "sighting triangle" method as part of its preliminary instruction, and the method for making said triangles is set forth in the Firing Regulations. They have always erred by using so short a range that little was learned by the triangles obtained, and so short a range that an error as large as some of the triangles could be made by putting the pencil obliquely through the hole in the aiming disc.

We used 100 yards for our triangle work at Perry, during the progress of the Small Arms Firing School, and began to find out things.

Later, while in the Experimental Station at the Infantry School of Arms at Camp Benning, orders came from higher up to make a thorough test of sighting triangle methods, based particularly on a very elaborately worked out method from the A. E. F. Eventually two of these tests fell to my lot.

To make the lessons plain, let me explain before going farther that the sighting triangle test is merely a three-shot test of the rifleman's ability to align the

sights uniformly on the bull's-eye—with the minor difference from real shooting that no real shooting is done.

The rifle is clamped in a box or rest that will prevent any motion whatever, even when the rifleman puts his face in the proper position. In the last trial we used merely empty .45 cal. pistol ammunition boxes, notched at either end to permit of the rifle being held firmly.

The bull's-eye in the simplest form of making sighting triangles, is merely a tin or cardboard disc, blackened with a non-reflecting paint, fitted with a two-foot handle, and with a very small hole in the center, said hole just enough to admit the point of a well-sharpened lead pencil.

The rest of the outfit is merely the side of a wall or an easel on which a sheet of typewriter or similar paper is tacked. The paper should be large enough to admit of a comfortable margin of white all round the disc and to admit of some movement of disc without running out of bounds.

The first step is to align the rifle sights on the middle of the paper, using the disc for an aiming mark, and moving box, rifle and all until it is aligned pretty well center.

Then the first victim lies down, looks

**SIGHTING TRIANGLE TARGETS**

(Figures in table represent in inches length of longest sides of triangles.)

	100 YARDS																200 YARDS								AVERAGE			
	1903 Rifle								1917 Rifle								1903 Rifle				1917 Rifle				100 Yds.		200 yds.	
	4 inch disc				8 inch disc				4 inch disc				8 inch disc				8 inch disc				8 inch disc				03 & 17	03 & 17		
	1	2	3-4	Av.	1	2	3-4	Av.	1	2	3-4	Av.	1	2	3-4	Av.	1	2	3-4	Av.	1	2	3-4	Av.	4'd	8'd	8'd	
Gunners.....																												
Durchenwald...	1.15	.75	1.58	.83	.63	.58	.45	.55	.65	.90	.75	.77	.74	1.50	.83	1.02	1.65	1.45	1.05	1.24	3.15	1.50	.30	1.65	.80	.79	1.45	
Scofield.....	1.05	.60	.60	.75	.53	.72	.85	.70	1.35	.53	.60	.83	1.06	1.03	.95	1.01	.73	1.05	1.80	1.19	4.25	1.70	.95	2.30	.79	.86	1.75	
Leushner.....	.75	.95	.80	.83	.72	.35	.58	.55	.60	1.00	.90	.83	.38	.20	.25	.28	1.30	2.30	1.50	1.70	.78	4.30	.85	1.98	.83	.42	1.84	
Puckett.....	.70	.70	1.27	.89	1.05	.70	.88	.88	1.00	.77	.40	.72	.50	.98	1.90	1.13	1.30	2.20	1.70	1.73	2.40	1.85	3.00	2.42	.81	1.01	2.08	
Mean.....				.83				.67				.79				.86				1.45				2.09	.81	.77	1.77	
Maximum.....		1.27		.89		1.05		.88		1.35		.83		1.90		1.13		2.30		1.73		4.30		2.42	.83	1.01	2.07	
Minimum.....		.60		.75		.35		.55		.40		.72		.20		.28		.73		1.19		.30		1.65	.79	.42	1.45	
Distance apart of Triangles				Av.				Av.				Av.				Av.				Av.				Av.	Av.	Av.	as above	
Durchdenwald and Scofield...	1.20	1.30		1.25	2.40	2.30	2.90	2.53	2.40	2.60	1.50	2.17	4.50	7.60		6.05	4.80			4.80	1.65			1.65	1.71	4.29	3.23	
Leushner and Pucket.....	5.20	1.50		3.35	1.30	2.50	2.90	1.93	3.40	1.60		2.50	3.10	4.95	3.40	3.82	2.00	1.60	2.50	2.03	3.80	6.40	5.10	5.10	2.93	2.88	3.57	
Average.....				2.30				2.23				2.34				4.94				3.42				3.38	2.32	3.58	3.40	
Cases in which 1st shot was low																									Av.	each man		
Durchdenwald...		x	x		x		x		x		x			x			x	x	x								52.7	
Scofield.....	x		x			x	x		x	x				x	x			x	x				x				66.7	
Leushner.....					x	x			x	x	x			x									x				38.9	
Puckett.....	x	x	x		x					x	x			x	x		x										52.7	

Percentage.... 46.2 58.3 75.0 50.0 53.8 33.3Av. of all 52.7

Analysis of Shooting (Greatest Error)  
 Durchdenwald... 6 Lateral, 10 Vertical, 3 Lateral-Vertical  
 Scofield..... 3 Lateral, 14 Vertical, 1 Lateral-Vertical  
 Leushner..... 8 Lateral, 6 Vertical, 3 Lateral-Vertical  
 Puckett..... 6 Lateral, 9 Vertical, 3 Lateral-Vertical

23 Lateral, 39 Vertical, 10 Lateral-Vertical



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through the sights, and tells the assistant standing beside him in which direction he wants the disc moved to agree with his idea of the correct relation of front sight and bull. Finally, when he is satisfied that he's got just the right line of white, or is just touching the bull, or is nicely in the middle of it—depending on his idea of the way to align the sights on the bull—he says all right, and the marker, without moving the disc, puts the pencil through the hole in its center, and makes a black dot.

Then he takes away the disc, and starts all over again, putting back the disc in a different position on the paper, and making the rifleman order it moved around until it is again in the right relation to the front sight.

When this has been done three times, the disc is removed for the last time, and the three dots are joined up, making a triangle, the size of which infallibly represents the amount of uniformity found in the sighting of that rifleman from shot to shot.

Keep in mind the fact that this triangle of three "shots," represents but one thing—eyesight. There is no alibi due to hold, ammunition, wind, creeping

barrel or anything else. If the rifleman aimed absolutely uniformly from shot to shot—which in the nature of eyes is not done, then there would be no triangle, merely three super-imposed dots.

This should be done at not less than 100 yards to exaggerate the size of the triangle, and make it more illustrative of sighting error, and to cut down the relative error due to moving of pencil point within the small hole in the center of the disc.

Enthusiasts carry this work out to even 500 yards, which is less important from the instructive point, than to illustrate clearly what the aiming error is at this long range.

My first test, in compliance with the orders to the Experimental Station to make tests with a view to re-writing the sighting triangle paragraphs in the Small Arms Firing Regulations, was with a mixed platoon of sharpshooters, marksmen, and unqualified men.

The chief lesson learned was that carelessness plays a large part in the size of the triangle, and as a rule the better educated, keener men, made the smaller triangles.

The standard of "qualification" was

tentatively set as being a triangle with the longest side not to exceed one inch, using the 100-yard distance. This would mean ten inches at 1,000 yards, while most of us will swear that we're varying two or three feet at that range. As before mentioned, ammunition variation does a lot at that range to shake our belief in our ability to see and hold.

The second triangle test that fell to my lot was to carry out my own suggestion that expert shots be called in to see if even they could also be sure of passing the minimum requirement before proceeding farther with the rifleman's education in the Army.

The distance was again 100 yards, and the apparatus varied from the old type, in having the black sighting disc painted on large irregular-shaped tin things two feet long in some cases, one of them oval, another circular, and a third like something cut out by a very drunken buzz-saw. The large irregular white pieces of tin covered up the paper below, the idea being to prevent guessing the position of the disc by using the sides of the paper or easel as a guide. The effect, however, was the same, the rifleman seeing the black disc painted on a white



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For Programs address Executive Officer,  
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background, and the whole moved to agree with his front sight, as the marker was signalled to move it. We had two sets of these sighting discs, one of them 4-inch diameter, the other 8-inch.

For "shooters," we called on four of the most expert riflemen in this country, who hardly need introduction to the rifle-shooting clan. The first was Capt. W. F. Leushner, whose name appears as the winner of dozens of matches in the years from 1900 to 1906 or later, who shot on our Olympic Team of 1908, and who is a man of the same class and experience as K. K. V. Casey, Dr. Hudson and the rest of the old clan of wonderful riflemen.

Then came Lieut. Perry Scofield, the man who holds the world's record of 114 consecutive bulls at 500 in an open competition at Wakefield. The third was Lieut. Dürchenwald of Iowa, whose Jacksonville and Perry record is well known, and who has shown himself in the various tests in which he has fired for me at Perry and Benning, to be one of the finest holders in the country.

The fourth was a veteran, Captain Puckett, who was barred out of Army

departmental competitions before some of us started the game, an associate of the famous Gun-Sling Dave, a fine shot even today.

Likewise it may be explained that Captain Leushner appears a scant 40, but is really 55 years old, Captain Puckett is 61, and likewise doesn't look, act, or feel it, while the two lieutenants are in their early 30's.

Wherefore we have a means of finding out just what there is to this eye-sight bugaboo, and what effect advancing years have on the ability to see 'em.

We used both rifles, the M 1917 and the M 1903, and we used both the 4- and the 8-inch discs at 100, using also the 200-yard distance as a check. The day was glaring and hot, the light on the sighting discs not of the best for this reason.

Dividing my discourse all-same Methody preacher, firstly we discovered that the sighting work proceeded faster, the shooters displayed more confidence in their moves, and there was less eye-strain, when using the 8-inch at 100, instead of the prescribed 4-inch, which is of course

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equivalent to 8-inch of the A target at 200.

Let's see about the results. Going to the table which I print, and which I had made up as being the first complete analysis of what is done in sighting triangles, we find that with the 8-inch disc at 100 yards, the four men with three triangles apiece—nine shots apiece in other words—averaged .67-inch—two-thirds of an inch—against .83-inch with the smaller 4-inch disc. As noted, the work proceeded much faster, there was less eye-strain, and the shooter proceeded with confidence. I have in the past made remarks in print as to the idiocy of using small sighting marks, with resultant eye-strain, and I have shot so many groups by using large aiming marks, that I could not obtain with the smaller marks, that to my mind there is little room for argument as to the all-round desirability of a larger aiming mark in target shooting.

Then we changed over to the M 1917 rifle, using the 8-inch disc at 100.

Here the advantage was very slightly with the 4-inch disc the figures being .86-inch with the 8-inch, and .79-inch



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(Signed) GEO. W. BARCK,  
*Chairman of Committee on Shooting.*

with the 4-inch. This was due chiefly to Perry Scofield's falling out of bed with a big 1.35-inch triangle, and this was in turn probably due to his holding in the middle of the bull, instead of at the bottom. When it comes to holding into the bull, then the smaller one will show a bit better results.

Secondly, we'll pause here a moment to shoot that old and tiresome stuff about the inaccuracy of the Model 1917 rear sight, because you can see a lot of territory through it. Before I get through I'm going to remove a considerable portion of the epidermis of that particular Camp Perry alibi of the year of 1918. The rear-sight got a lot of blame for what lay at the door of the lack of wind-gauge, poor rifle, and poorer ammunition. Riflemen used to the Lyman rear know full well that the amount you can see through the rear sight has no bearing on the accuracy of the front sight alignment.

Switching off on this for a moment, and consulting the table of these four experts, two of these men over 50 years of age, we find that the average of the M 1903 rifle at 100 yards with both sizes of discs, in the hands of four shooters, was .75-inch. The average of

the M 1917 rifle, 100 yards, both sizes of discs, was just .83-inch, a difference against the M 1917 of .08-inch. Carried out to 1,000 yards, this would mean the huge difference of .08-inch.

At 200 yards we find that the M 1903 averaged with .08-inch disc—the 4 not being used of course—1.45-inch.

The M 1917 averaged 2.09-inch. Difference against the M 1917 at 200 yards, .64-inch.

The difference at 200 yards is by no means the true difference. The M 1917 was shot last, the men were tired and hot and perspiring, and one of them shot in a hurry to get away. The result showed some very large triangles that all hands agreed were far larger than they should have been. Had occasion permitted this part of the test would have been repeated, because there is no reason why the 200-yard triangles should be more than twice the size of those at 100. Therefore the 100-yard test in the morning, before the riflemen had fired the equivalent of 45 shots apiece, is to be considered the basis of comparison.

Thirdly, let us proceed to an investigation of what the triangles showed as to the eye-sight alibi for getting out of the

black—supposing of course that our light at long range is good, and the contrast not materially less than that obtained at 100 yards in this triangle making.

With the M 1903 rifle and 4-inch disc at 100, which is equivalent to the 8-inch at 200 and the 20-inch at 500, the average of the longest side of the triangles made, as said before, was .83-inch. The largest triangle, 1.58 inches, was made by Durchenwald, the smallest, .60-inch, made by Scofield. Carried out to 1,000, this would mean an average of 8.3 inches for eye error, and a maximum error in three shots of 15.8 inches, taking four men, and three triangles apiece.

The larger aiming disc cut down this average to .67, as before said, and reduced the largest triangle made by anybody, to 1.05 inches, made by Captain Puckett.

Now let's take the much-maligned M 1917, which can't be a good sight because it is so natural, and so much like watching a ball game through a knot hole in the fence—you see the game and don't worry about the knot-hole or whether your eye is in the center.

The average with 4-inch disc at 100 with M 1917, was .79 inches. The largest triangle made was 1.35 inches,



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smaller than the largest made with the 1903 rifle. Using the larger aiming disc made this average .86 inches, and gave as the largest triangle, 1.50 inches, made by Durchenwald.

Inasmuch as the M 1917 average on the standard disc at 100 was .04-inch smaller than the average of the 1903, and as the largest triangle made with the M 1917 was 1.35 against 1.58 for the M 1903, does anybody in the house feel that the old alibi as to the inaccurate M 1917 rear sight has much actual foundation? If so, let him speak up in meetin'.

Remember this test cut out and laid aside everything but the straight process of uniformity of aim from shot to shot, cut out poor ammunition, improperly rifled barrels, and the necessity for holding off for wind. All these considerations are freely admitted as detracting from scores made with the M 1917 during the war—but nothing in any test proves that the rear sight is optically less accurate than the M 1903, and you might keep this in mind for future reference.

Were the M 1917 peep still smaller, it would be an improvement for *target* shooting, because of its sharpening effect

akin to stopping down a camera lens—but this by no means applies to the fact that the M 1903 peep is smaller than the M 1917. The 1903 is too far from the eye to give any such diaphragming effect, and is, if anything, inferior optically to the M 1917 even for target work.

Kindly keep in mind the fact that two of these men were over 50 years of age.

It is a good time now, to forget a lot of this wild-eyed piffle as to trying to get the eye in the center of the M 1917 peep. The secret is to forget it, to focus on the front sight and then on the bull, then the eye will go naturally to the center of the peep, as all old users of Lyman sights know quite well.

They got so violent on this subject at Perry that the testimony sounded like an experience meetin' of the Delirium Tremens Club. They found first a white spot in the center of the peep, which of course exists but bears no relation to the price of eggs. Then another nut found a black spot in the middle of this white spot. Later a third fellow bobbed up and alleged that in the middle of this black spot was a violet spot, and if Perry had lasted another month they'd have located

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a sky-blue spot inside that violet one. All of which puts me in mind of the good old school song about the green grass grew all 'round, all 'round, as I said before.

Fourthly, let's see what the triangle tests show as to the effect of mature years on the ability to sight accurately.

Taking Captain Puckett's triangles right through we find at 100 with the '03 rifle and 4-inch disc, .89-inch for the



three triangles, .88-inch for the .08-inch disc, .72-inch for the M 1917 rifle, 4-inch disc, and 1.13 with the same rifle and 8-inch disc. At 200 yards, M 1903 rifle, 1.73 inches, M 1917 rifle, 2.42 inches, which latter figure, as with all the figures for the M 1917 at 300, represented the last triangles of the day, with atrocious light and heat. The falling off was noticeable. Be this as may be, the fact remains that the average triangles of a man 61 years old, with the M 1917 rifle and at 200-yard range, figured out 2.42 inches, or .42-inch larger than the theoretical eye-error according to the Snellen standard.

Captain Leushner, 55 years old, using the Model 1917 rifle, 8-inch disc, at 100 yards, made the three smallest consecutive triangles I have ever seen, and I believe they constitute a record.

They ran .38-inch, .20-inch, and .25-inch, average for the three .28-inch. That is the distance between the two wide shots of the first was roughly .4-inch, the next .20-inch, and the next a quarter inch, with the average a shade over a quarter inch. To my mind this settles the piffle we've heard as to the lack of accuracy of the large peep of the Model 1917 rifle, and the blame for the poor shooting done therewith has to be shifted to the shoulders of poor ammunition, poor barrels, and general distrust of the rifle. As a matter of fact, aside from the regrettable lack of wind gauge, the M 1917 was head and shoulders the better battle rifle of the two.

I am not including in this remark the too-long stock, nor the cocking on the closing stroke, both of which are very objectionable, but merely the sighting equipment.

Once more came the difference in triangle location shown by men who thought they sighted alike—that is both using a white line. At 100 yards with the M 1903 rifle, 4-inch disc, Leushner and Puckett averaged 3.35 inches apart. With the 8-inch disc, which they saw more plainly, they averaged 2.23 inches.

With the M 1917 rifle they averaged 2.50 and 3.82 inches for the two disc sizes. At 200 with the M 1917 they averaged 5.10 inches apart, against 2.03 with the M 1903, showing that each man selected what was to him the center, and held it consistently, although it varied a trifle in location.

It became apparent that the first shot of the triangle went low in more than its fair share of one-third. Wherefore we analyzed this and found as follows:

Durchenwald, first shot the lowest in 52.7 per cent of the shots, an exact proportion being of course 33 per cent.

Scofield first shot the lowest in 66.7 per cent of the trials.

Leushner first shot low in 38 per cent.

Puckett first shot low in 52.7 per cent of the cases.

The moral is of course that the rifleman actually firing will put the first shot

in a trifle lower than the succeeding ones, and possibly ought not to shift sights if the first one is a bit low in the bull.

A recapitulation of the size of the triangles made by these experts prove plainly that the man who has learned to sight, *and is careful*, can in good light *see within a minute of angle at all ranges*. If the light is bad, if there is heavy mirage, or much moisture, then this widens out at 1,000 yards, but rarely over 15 inches for extremes.

I emphasize the word "careful" in doing this sighting, as experience with enlisted men in such trials, proved that more depended on the care exercised and the interest taken, than upon eyesight.

By all means a coach or team captain, if time permits, should conduct these sighting triangle tests with his men. The confidence gained by the men in their ability to see much closer than they suspected from their scores, is the chief gain, while results showing any man keeping consistently larger than 1 to 1.5 inches at 100, demand investigation as to care—and finally eye-sight.

So, when we total up our reasons for not abiding within the blessed black at all times, we find them thusly:

1. Ammunition giving an average of but 5 inches margin on either side of the group if superimposed perfectly on the bull at 1,000 yards.

2. Barrels that walk during a string and automatically go out of the black.

3. Error of the mechanical hold, about 10 inches, at 1,000.

4. Error of eye-sight, about 12 inches at 1,000, taking the average of all sorts of conditions.

Needless to say, sometimes these errors compensate, at other times they exaggerate—and when they do, the marker turns the disc with the detestable criss-cross painted on it.

I am firmly convinced that in my own case I would practice consistently with a rifle having a telescope sight on it for practice in holding, I'd make a few triangle tests to see that the well-known glims were doing in their work of aligning the sights, and then, last but not least, I'd buy the best, hand-picked, commercial 180-grain match ammunition I could find, for all work over 600 yards. Even though it costs 20 cents per shot, what is that when you're in the Wimbledon after a trip half across the country.

I've cut out any discussion of wind, because it is outside of the elevation problem, but it is a fact that 180-grain stuff instead of drifting out 111 inches for a ten-mile cross wind at 1,000, moves about 70 inches. More important still is the fact that this carefully made ammunition cuts down the actual group size—considering only verticals, to nearer an average of 18 than 28 inches, and you need that 9-inch margin at 1,000 yards.

Commercial 180-grain match stuff found at the big shoots costs so much more than the companies ask for it, that

they might as well give it away, and the chap who through stinginess or lack of information, fails to avail himself of the wonderful skill, pains, time and money spend to make this stuff the finest possible to make, doesn't deserve to win long range matches—and doesn't. It is not to the advantage of the companies to go into the details of the work of making up this stuff. But a tale could be unfolded as to painstaking selection of cases, primers, bullets, bullet jacket metal, and the machines that do the work, that would cause a riot of anxious seekers of this gilt edged stuff, around their tents.

Possibly three figures might illustrate my point.

The prize-winning ammunition in the open machines rest test of 1913, made by a commercial company, gave a mean radius at 1,000 yards of 8.7 inches, for the 150-grain.

The 180-grain stuff winning in its own class, made by the same company, gave a mean radius of 6.15 inches.

The 150-grain ammunition for this year will have a mean radius of about 9.5 inches. Now just multiply each mean radius figure by about three, and you get a fair comparison, outside of the wind effect, which at 1,000 yards is still another and important story.

#### NATIONAL MATCH TEAMS.

(Concluded from page 307)

2. Each member of the National Guard team must be a member of the active National Guard duly recognized in his respective grade and organization by the Militia Bureau prior to appointment as a member of a team.

3. The word "principals" in the first line of paragraph 17 of the above bulletin means *shooting members*; therefore, to insure that there be not less than six competitors who have not before shot in a National Match, the alternates should be selected with this provision in mind, in the event they might become principals on the team.

4. While any officer of the National Guard may be a duly qualified member of a team, no officer above the grade of captain, except the team captain, who may be a major, shall be entitled to *pay* while attending the National Matches.

5. The seventeen members of each team, as authorized by paragraph 21 (Bulletin 18), will be entitled to transportation to and from the Navy rifle range at Caldwell, New Jersey, and to sleeping-car berths where the journey is in excess of twelve hours. Official transportation requests to common carriers will be issued by the respective Property and Disbursing Officers to National Guard teams.

By direction of the Secretary of War.  
J. MCI. CARTER,  
Major General, G. S.,  
The U. S. Army.



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**Army of Occupation Small Arms Competition**

(Continued from page 306)

Aggregate scores, both slow-fire and rapid-fire, all distances, as shot in matches 1 to 9 inclusive, gave the basis for Match No. 10, with a first prize of 1,000 marks, a second of 300 marks, a third of 100 marks, a fourth of 50 marks, and a fifth of 25 marks. A compilation of the aggregates in all the individual events showed these 25 contestants at the head of the list:

AGGREGATE SCORES IN MATCH No. 10

*Winners*

First Place:	Score
Cullar, E. V., 1st Sgt. Co. F, 2d Engrs.	304
Second Place:	
Otto, H., Sgt. Co. E, 7th Inf.	292
Third Place:	
Poulton, P., Pvt. Co. D, 30th Inf.	290

Name	Rank and Org.	Score
1. Cullar, E. V., 1st Sgt. Co. F, 2d Engrs.		304
2. Otto, H., Sgt. Co. E, 7th Inf.		292
3. Holton, P., Pvt. Co. D, 30th Inf.		290
4. Monroe, R. A., Capt. 4th Engrs.		290
5. Emig, M. D., Pvt. Co. A, 5th Mar.		288
6. Harris, J. G., 1st Lt. 47th Inf.		287
7. VanDyke, J., Cpl. Co. L, 38th Inf.		285
8. Piety, G. E., Pvt. Co. K, 47th Inf.		285
9. Fultz, C. G., Pvt. Co. G, 5th Mar.		285
10. Dimmick, I. C., 2d Lt. 9th Inf.		284
11. Becher, E. H., Pvt. 80th Co. 6th Mar.		284
12. Rigney, F. E., Cpl. Co. B, 2d Am. Tn.		283
13. Lackie, J. B., Pvt. Co. L, 7th Inf.		283
14. Nickels, C. E., Sgt. Co. D, 2d Engrs.		282
15. Bohon, C., Sgt. Co. I, 23d Inf.		282
16. McNally, D. O., Sgt. Co. F, 2d Engrs.		280
17. Miller, W. J., Pvt. Co. G, 4th Inf.		280
18. Engles, W., Cpl. Hq. Co., 23d Inf.		279
19. Stitson, A. H., Cpl. Co. A, 38th Inf.		279
20. Iverson, O., Sgt. Co. C, 47th Inf.		279
21. Clay, R. F., Cpl. Co. B, 1st Engrs.		279
22. Cyskowski, J., Cpl. Co. G, 3d Am. Tn.		279
23. Schroeder, R., Cpl. Co. L, 16th Inf.		279
24. Smith, Carl, Cpl. Co. E, 30th Inf.		278
25. Alt, G. J., Capt. 47th Inf.		278

The relative standing of organizations in the competitions based on the aggregate scores of members competing in Match No. 10. (The aggregate scores of Matches Nos. 1, 2, 3, 5, 6, 7 and 9) shows:

Organization	Avg. Score
1. 4th Engineers	255.25
2. 5th Marines	247.66
3. 58th Infantry	239.92
4. 1st Engineers	238.79

5. 4th Infantry	237.79
6. 2d Engineers	236.77
7. 6th Engineers	234.65
8. 30th Infantry	231.33
9. 6th Marines	230.85
10. 3d Ammunition Train	230.19
11. 7th Infantry	225.49
12. 2d Ammunition Train	224.83
13. 4th Supply Train	223.00
14. 47th Infantry	222.19
15. 38th Infantry	220.18
16. 4th Div. Tn. Hdqrs.	219.80
17. 59th Infantry	215.63
18. 9th Infantry	215.63
19. 23d Infantry	214.05
20. 3d Supply Train	211.00
21. 2d Division Train	207.67
22. 16th Infantry	207.14
23. 28th Infantry	205.98
24. 7th Machine Gun Battalion	201.00
25. 26th Infantry	200.09
26. 18th Infantry	199.81
27. 39th Infantry	199.77
28. 9th Machine Gun Battalion	199.62
29. Hdqrs. 5th Brigade	181.50
30. 8th Machine Gun Battalion	138.50
31. 4th Ammunition Train	137.00
32. Hdqrs. 6th Brigade	49.50

The automatic rifle as a match weapon took prominence in Match No. 11, for individual automatic riflemen. The conditions of this match shot on June 11, were:

Range—200, 300 and 500 yards. Number of shots, 20 at each range. Target D.

Time—20 seconds at ranges 200 and 300 yards. 30 seconds at range 500.

Position—Prone from standing.

Prior to the signal to commence firing being given, the Range Officer will cause the pieces to be loaded with a magazine filled with twenty rounds and the change lever of the rifle set at safety. At the signal "commence firing," the prone position will be assumed and firing continued until the ammunition is exhausted, or until the signal "cease firing" is received. Either semi-automatic or automatic fire may be employed.

Eligible to Compete—Any officer or enlisted man of the U. S. Army of Occupation.

First prize, 350 marks. Second prize, 100 marks. Third prize, 50 marks.

The 25 high competitors in this event included:

**MATCH No. 11**

1. Connelly, P. A., Cpl. Co. F, 5th Mar., 200 yards, R. F., 91; 300 yards, R. F., 94; 500 yards, R. F., 36. Total score, 221.
2. Strain, S. A., Pvt. Co. K, 5th Mar., 200 yards, R. F., 83; 300 yards, R. F., 76; 500 yards, R. F., 57. Total score, 216.
3. Williams, J. P., Pvt. 74th Co. 6th Mar.,

200 yards, R. F., 72; 300 yards, R. F., 66; 500 yards, R. F., 62. Total score, 200.

4. Beyer, O., Pvt. Co. M, 30th Inf., 200 yards, R. F., 93; 300 yards, R. F., 77; 500 yards, R. F., 29. Total score, 199.

5. Titherland, J. E., Pfc. Co. M, 5th Mar., 200 yards, R. F., 81; 300 yards, R. F., 66; 500 yards, R. F., 46. Total score, 193.

6. Privitt, E. L., Pfc. Co. D, 5th Mar., 200 yards, R. F., 81; 300 yards, R. F., 71; 500 yards, R. F., 38. Total score, 190.

7. Wingo, J. B., Pvt. Co. G, 7th Inf., 200 yards, R. F., 78; 300 yards, R. F., 80; 500 yards, R. F., 32. Total score, 190.

8. Marselek, J., Pvt. Co. L, 7th Inf., 200 yards, R. F., 79; 300 yards, R. F., 59; 500 yards, R. F., 51. Total score, 189.

9. Garrison, J. L., Pvt. Co. I, 26th Inf., 200 yards, R. F., 85; 300 yards, R. F., 58; 500 yards, R. F., 42. Total score, 185.

10. Moritz, H. B., Pvt. Co. D, 9th Inf., 200 yards, R. F., 79; 300 yards, R. F., 59; 500 yards, R. F., 33. Total score, 183.

11. Lester, Jose, Pvt. Co. I, 4th Inf., 200 yards, R. F., 70; 300 yards, R. F., 74; 500 yards, R. F., 39. Total score, 183.

12. Sabin, A., Cpl. Co. M, 47th Inf., 200 yards, R. F., 76; 300 yards, R. F., 69; 500 yards, R. F., 37. Total score, 182.

13. Herwick, W. L., Pvt. Co. I, 5th Mar., 200 yards, R. F., 78; 300 yards, R. F., 48; 500 yards, R. F., 56. Total score, 182.

14. Smith, T. P., Cpl. Co. B, 47th Inf., 200 yards, R. F., 52; 300 yards, R. F., 71; 500 yards, R. F., 59. Total score, 182.

15. Foquelquist, Pvt. 6th Mar., 200 yards, R. F., 80; 300 yards, R. F., 53; 500 yards, R. F., 42. Total score, 180.

16. Kramer, F., Pvt. 97th Co. 6th Mar., 200 yards, R. F., 79; 300 yards, R. F., 61; 500 yards, R. F., 40. Total score, 180.

17. Turner, W. M., Pvt. Co. B, 58th Inf., 200 yards, R. F., 73; 300 yards, R. F., 58; 500 yards, R. F., 48. Total score, 179.

18. Clemmens, A. W., Pvt. Co. A, 30th Inf., 200 yards, R. F., 72; 300 yards, R. F., 45; 500 yards, R. F., 62. Total score, 179.

19. Buckwalter, B. G., Pvt. Co. E, 47th Inf., 200 yards, R. F., 81; 300 yards, R. F., 62; 500 yards, R. F., 34. Total score, 177.

20. Whitley, L., Pvt. Co. D, 38th Inf., 200 yards, R. F., 78; 300 yards, R. F., 56; 500 yards, R. F., 42. Total score, 176.

21. Neely, J. R., 2d Lt. 23d Inf., 200 yards, R. F., 55; 300 yards, R. F., 85; 500 yards, R. F., 36. Total score, 176.

22. Brennan, M. J., Pfc. Co. D, 5th Mar., 200 yards, R. F., 78; 300 yards, R. F., 65; 500 yards, R. F., 33. Total score, 176.

23. Doerr, W. J., Pvt. Co. B, 47th Inf., 200 yards, R. F., 81; 300 yards, R. F., 56; 500 yards, R. F., 38. Total score, 175.

24. Etchegon, J. P., Pvt. Co. B, 5th Mar., 200 yards, R. F., 77; 300 yards, R. F., 63; 500 yards, R. F., 35. Total score, 175.

25. Daly, G. C., Pvt. Co. F, 7th Inf., 200 yards, R. F., 81; 300 yards, R. F., 46; 500 yards, R. F., 48. Total score, 175.



# The Small Bore Events At The National Matches

The remarkable growth of interest in "long range" shooting with 22 caliber ammunition has led to the inclusion of Small Bore events in this year's National Matches.

A notable factor in stimulating this interest is the development of the U. S. .22 N. R. A. Long Rifle Cartridge. It gives 50 yards of added accuracy and makes possible accurate 22 calibre shooting at 250 yards.

Consider therefore what the power and uniformity behind such accuracy will do on the 200 yard, 100 yard and 50 yard ranges.

We suggest that you try these cartridges and note the close groupings at any range from 50 to 250 yards.

Following are the ballistics of the N. R. A. cartridges with solid lead bullet:

Distance in Yards	Remaining Velocity in ft. sec.	Striking Energy in ft. lbs.	Accuracy Radius Inches	Height Trajectory in Inches
0	1050	98.		
50	986.7	86.3	.43	1.0
75	958	81.4	.62	2.4
100	931	76.8	.75	4.5
150	881	68.7	1.30	10.2
200	836	62.0	2.20	18.6
250	794	55.9	2.60	31.8



## United States Cartridge Company

111 Broadway

NEW YORK

More than 200 entries were made in the first Company Team Match for service rifles listed as Match No. 12. The conditions of this match were: Rapid Fire—200 yards 10 shots, 60 seconds, kneeling or sitting from standing; 300 yards 10 shots, 70 seconds, prone from standing; and 500 yards 10 shots, 80 seconds prone—all shooting on the D Target. Slow Fire—300 yards, Target A, 10 shots, 5 sitting and 5 kneeling; 500 yards, Target B, 10 shots prone; 600 yards, Target B, 10 shots prone. Two sighting shots permitted in the 600-yard stage.

For the Rapid Fire Range, teams were assigned groups of 4 targets. At any range fired, any target in the group may have more than ten hits on it, but the total number of hits on the entire group will not exceed 40. A group receiving an excess of 40 hits at any one range will result in the team pertaining to that group firing again at the particular range.

Eligible to Compete—Teams of 4 riflemen each from any company, battery, troop or detachment of the U. S. Army of Occupation. Personnel of teams may consist of any number of officers or enlisted men properly forming a part of the unit which they represent. One member of each team to be designated as Team Captain. Units may enter any number of teams.

First prize, 500 marks. Second prize, 150 marks. Third prize, 75 marks.

The high 25 competitors in this match were:

### RECORD OF SCORES OF COMPANY RIFLE TEAMS IN MATCH No. 12

Rifle Teams	Total score R. F.	Total score S. F.	Grand total
1. Hq. Co. 4th Engrs.....	534	497	1,031
2. 82d Co. 6th Mar.....	526	499	1,025
3. Co. F, 2d Engrs.....	511	505	1,016
4. 74th Co. 6th Mar.....	529	483	1,012
5. Co. L, 7th Inf. (1st Tm.)	528	483	1,011
6. Co. F, 5th Mar.....	520	491	1,011
7. 96th Co. 6th Mar.....	524	484	1,008
8. Co. G, 3d Am. Tn.....	500	503	1,003
9. Co. G, 2d Am. Tn.....	510	491	1,001
10. Co. F, 6th Engrs.....	522	473	995
11. Co. B, 6th Engrs.....	507	487	994
12. Co. H, 47th Inf.....	521	472	993
13. Co. K, 5th Mar.....	504	487	991
14. Co. B, 2d Engrs.....	487	502	989
15. Co. B, 9th Inf.....	499	488	987
16. 75th Co. 6th Mar.....	517	469	986
17. Co. A, 1st Engrs.....	506	478	984
18. Co. A, 2d Engrs.....	480	503	983
19. Co. B, 30th Inf.....	498	485	983
20. Co. E, 7th Inf.....	488	494	982
21. Co. A, 6th Engrs.....	507	475	982
22. Co. M, 5th Mar.....	492	486	978
23. Co. D, 2d Engrs.....	502	474	976
24. 80th Co. 6th Mar.....	469	505	974
25. 78th Co. 6th Mar.....	477	496	973

The Company Team Match for service rifles was followed by Match No. 13, for Company Automatic Rifle Teams. The conditions of this event were:

Range—200, 300 and 500 yards. Target D. Number of shots, 20 per rifle at each range.

Time—20 seconds at ranges 200 and 300 yards. 30 seconds at range 500 yards.

Position—Prone, from standing.

Prior to the signal "commence firing" being given, the Range Officer will cause each piece to be loaded with one magazine filled with 20 rounds and the change lever of the rifle to be set at safety. At the signal "commence firing" the prone position will be assumed and firing continued until the ammunition is exhausted, or until the signal "cease firing" is received. At any range fired any target in the group may receive more than twenty hits on it; but the total number of hits on the entire group will not exceed 80. A group receiving an excess of 80 hits at any one range will result in the team pertaining to that group firing again at that particular range.

Eligible to Compete—Teams of 4 Automatic Riflemen from any company, battery, troop, or detachment of the U. S. Army of Occupation. Personnel of team may consist of any number of officers or enlisted men properly forming a part of the unit which they represent. One member of each team to be designated as Team Captain. Units may enter any number of teams.

First prize, 350 marks. Second prize, 100 marks. Third prize, 50 marks.

With an entry list of 110 teams, these 25 were high:



RECORD OF SCORES OF COMPANY AUTOMATIC RIFLE TEAMS, MATCH NO. 13

Automatic Teams	Total Score
1. Co. F, 5th Mar.	760
2. 74th Co. 6th Mar.	628
3. Co. L, 7th Inf.	626
4. Co. L, 30th Inf.	617
5. Co. D, 9th Inf.	617
6. 76th Co. 6th Mar.	614
7. Co. D, 5th Mar.	606
8. Co. I, 5th Mar.	598
9. Co. M, 30th Inf.	590
10. Co. H, 5th Mar.	572
11. Co. G, 5th Mar.	567
12. 82d Co. 6th Mar.	563
13. Co. E, 5th Mar.	562
14. Co. A, 4th Inf.	561
15. 78th Co. 6th Mar.	560
16. 79th Co. 6th Mar.	557
17. 83d Co. 6th Mar.	555
18. Co. K, 5th Mar.	551
19. Co. F, 9th Inf.	550
20. Co. H, 38th Inf.	535
21. 95th Co. 6th Mar.	535
22. Co. D, 30th Inf.	535
23. Co. G, 4th Inf.	533
24. Co. E, 4th Inf.	528
25. Co. G, 30th Inf.	506

A Regimental Team Match with conditions the same as in the Company Team Match for service riflemen, was scheduled as the 14th event and attracted 50 entrants. The high 25 at the finish and their scores are:

RECORD OF SCORES OF REGIMENTAL RIFLE TEAMS, MATCH NO. 14

Reg. Rifle Teams	Total Score
1. 2d Engrs.	1,541
2. 5th Mar.	1,535
3. 7th Inf.	1,524
4. 6th Mar.	1,521
5. 9th Inf. (1st Team)	1,517
6. 7th Inf. (2d Team)	1,507
7. 23d Inf. (1st Team)	1,507
8. 6th Eng. (1st Team)	1,506
9. 4th Engrs.	1,504
10. 5th Mar. (2d Team)	1,500
11. 23d Inf. (2d Team)	1,497
12. 6th Eng. (2d Team)	1,497
13. 4th Inf. (1st Team)	1,488
14. 16th Inf.	1,485
15. 59th Inf.	1,476
16. 6th Engrs. (4th Team)	1,471
17. 30th Inf. (1st Team)	1,466
18. 6th Engrs. (3d Team)	1,465
19. 47th Inf. (2d Team)	1,460
20. 2d Div. Tns.	1,459
21. 58th Inf.	1,457
22. 47th Inf.	1,457
23. 5th Mar. (3d Team)	1,454
24. 23d Inf. (5th Team)	1,454
25. 4th Div. Trains	1,447

A competition for Regimental Automatic Rifle Teams, following the conditions for the Company Automatic Rifle Team Match and listed as Match No. 15, completed the first

half of the program. The 20 high units in this competition were:

RECORD OF SCORES OF REGIMENTAL AUTOMATIC RIFLE TEAMS, MATCH NO. 15

Reg. Automatic Teams	Total Score
1. 5th Marines (1st Team)	1,078
2. 5th Marines (2d Team)	1,051
3. 6th Marines (1st Team)	1,027
4. 30th Inf. (1st Team)	970
5. 6th Marines (2d Team)	914
6. 38th Inf. (2d Team)	909
7. 38th Inf. (1st Team)	909
8. 9th Inf. (1st Team)	896
9. 9th Inf. (2d Team)	889
10. 5th Marines (3d Team)	885
11. 7th Inf.	870
12. 30th Inf. (2d Team)	867
13. 4th Inf. (1st Team)	807
14. 26th Inf.	801
15. 23d Inf.	795
16. 47th Inf.	793
17. 4th Inf. (2d Team)	757
18. 18th Field Artillery	702
19. 28th Inf.	672
20. 58th Inf.	632
21. 16th Inf.	602
22. 10th Field Artillery	591

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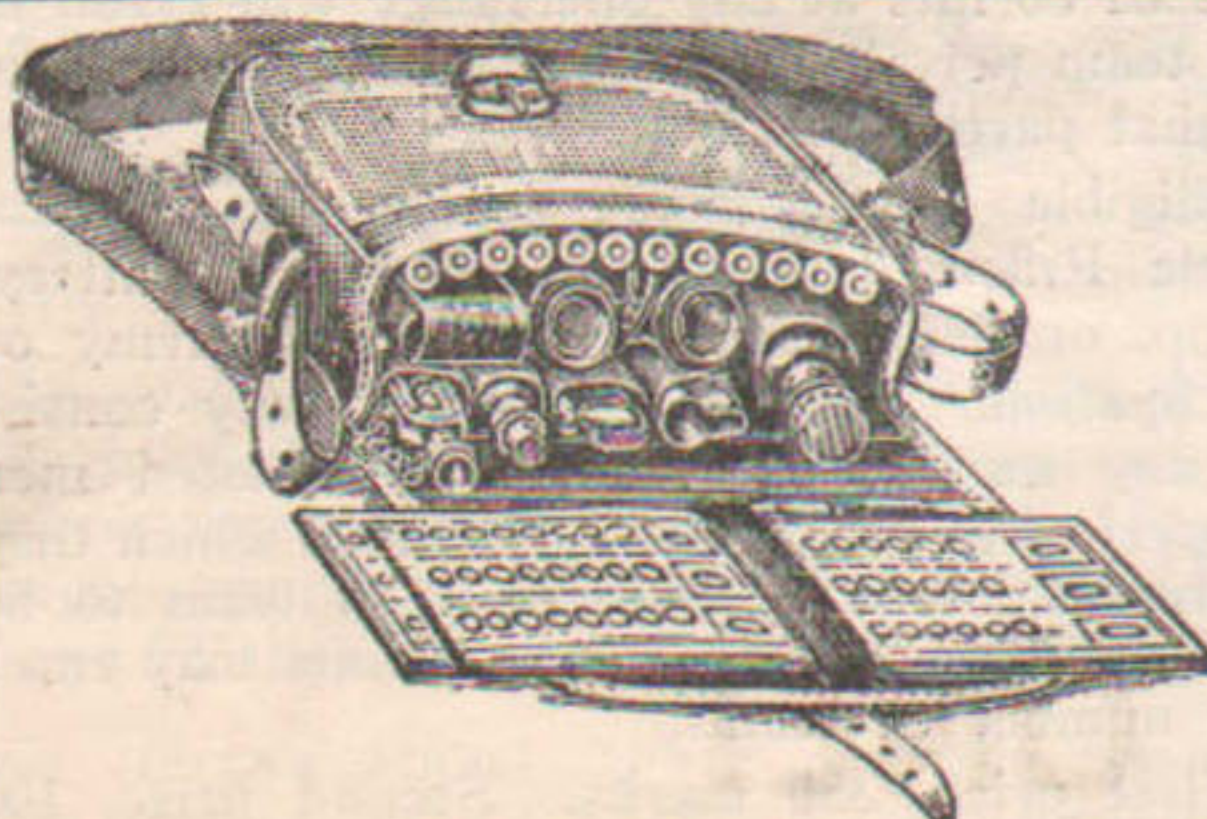
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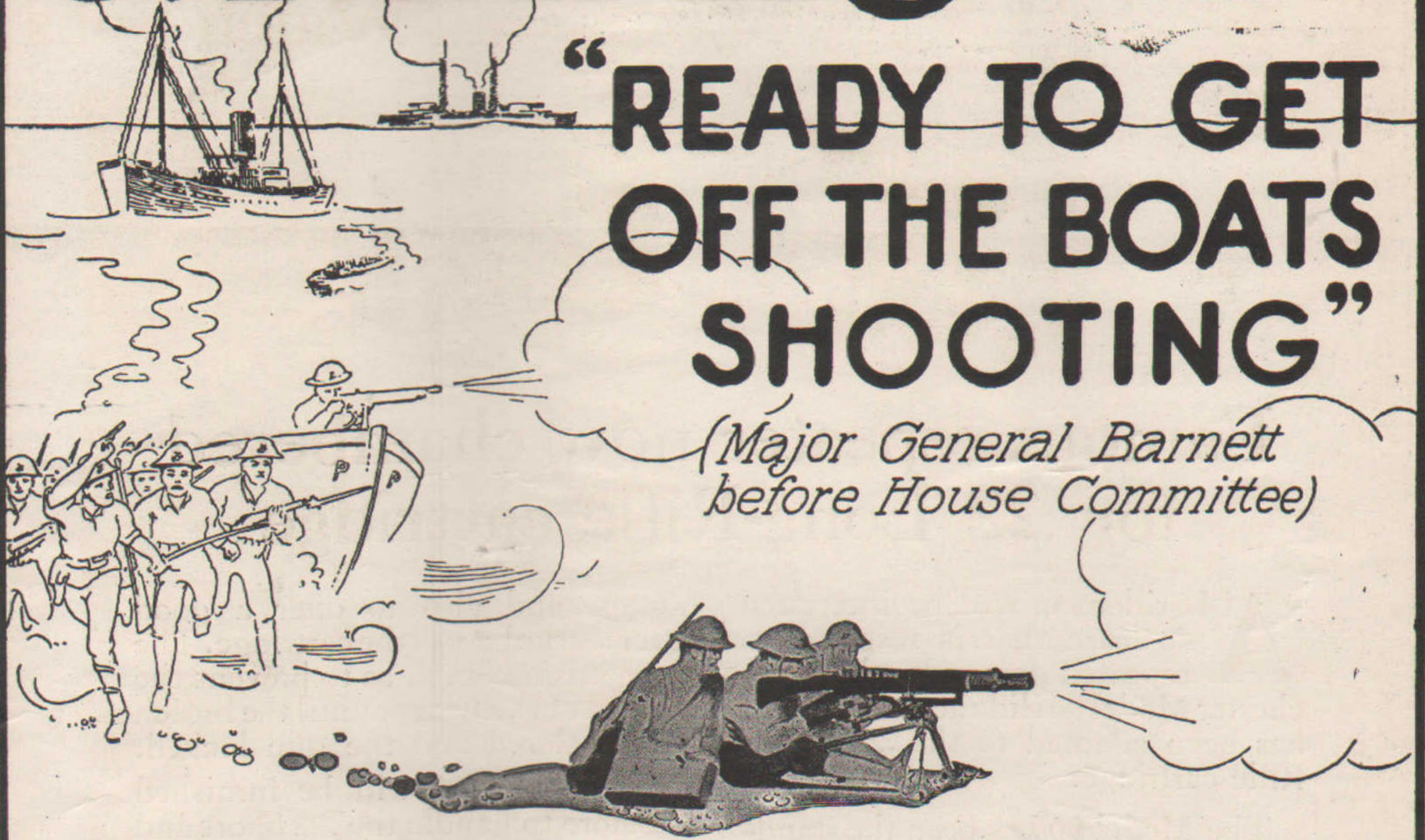
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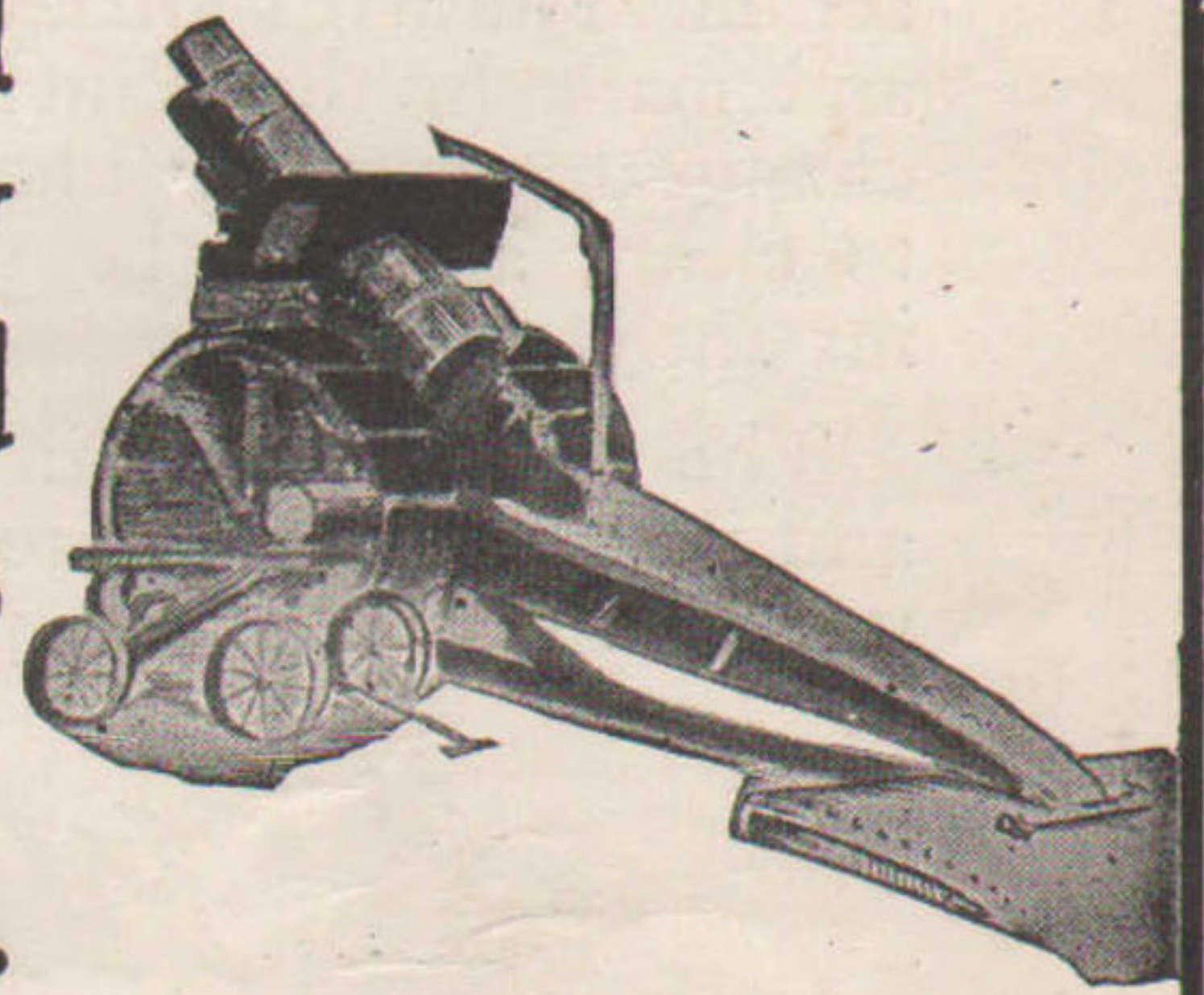
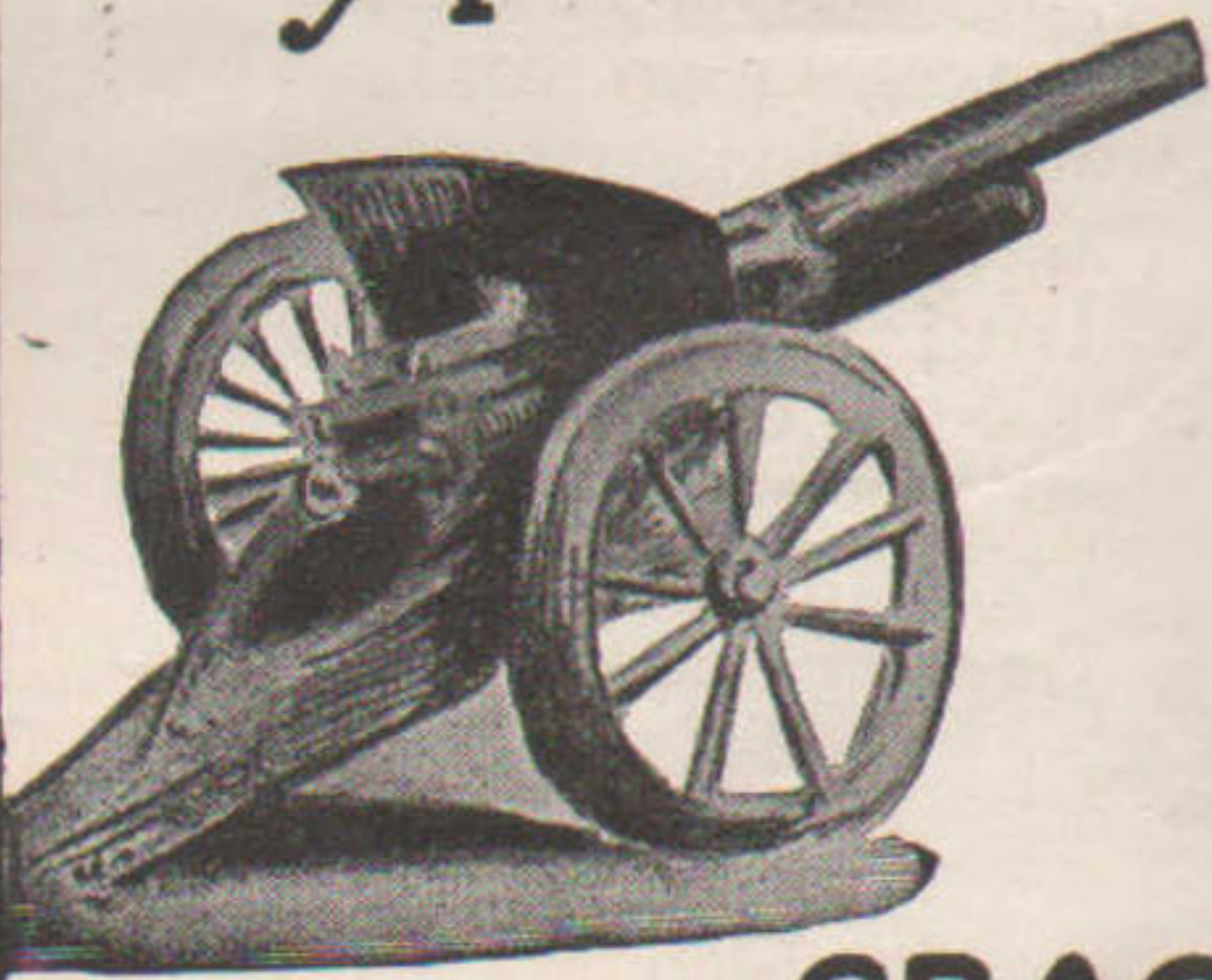
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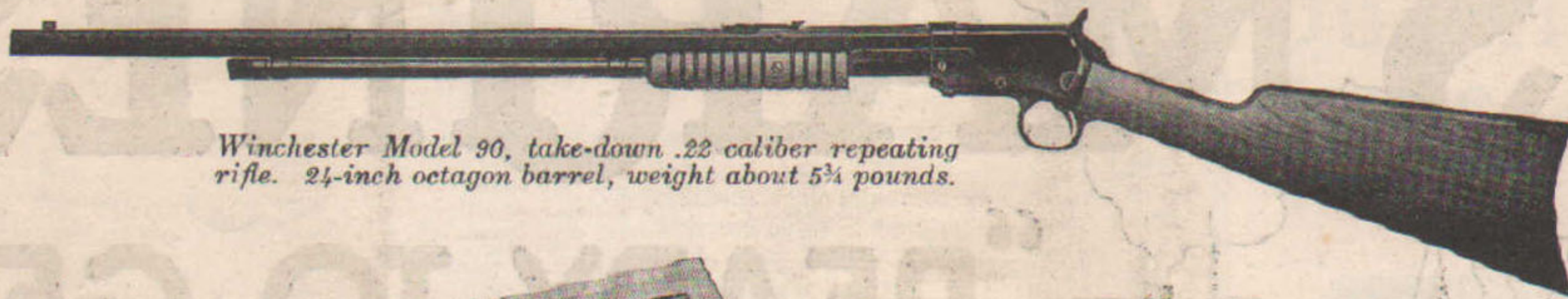
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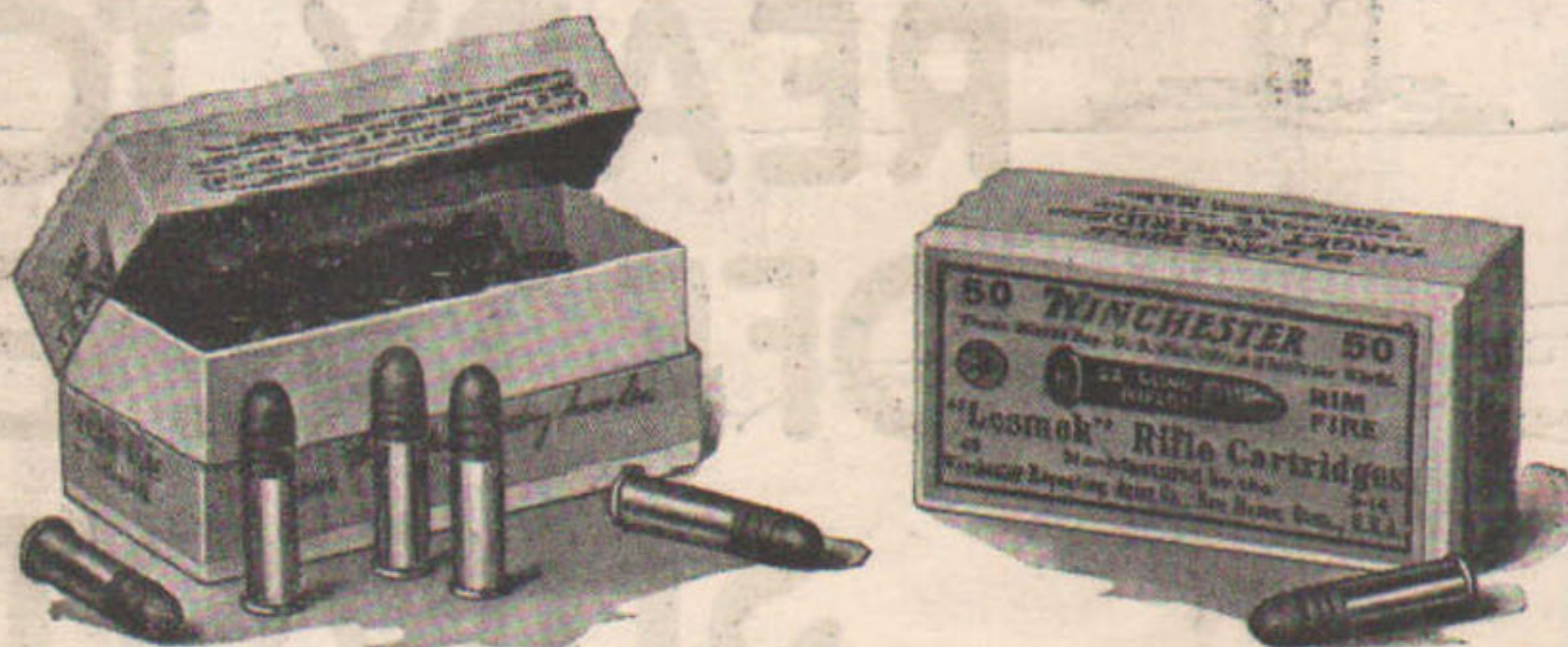
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