


THE AMERICAN RIFLEMAN'S MAGAZINE

ARMS AND THE MAN

RIFLE
AMERICAN
SHOOTING



VOL. LXVIII, No. 5

OCTOBER 15, 1920



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At Antwerp With the Hand-Gun

Special Correspondence to Arms and The Man

DINNER was on in the Officers' Club at Beverloo. The pistol and revolver matches, which were to decide the world's hand-gun championships for 1920, were but a few days away. At every table, the diners were engrossed in one topic of conversation—who would win the coveted laurels?

"Belgium" declared a bearded giant of an officer, "has the new world's pistol champion. There can be little doubt about it. He has won every pistol and revolver match on the continent. He has won many matches in England."

An American who had watched the practice of the United States Team quietly addressed the Belgian.

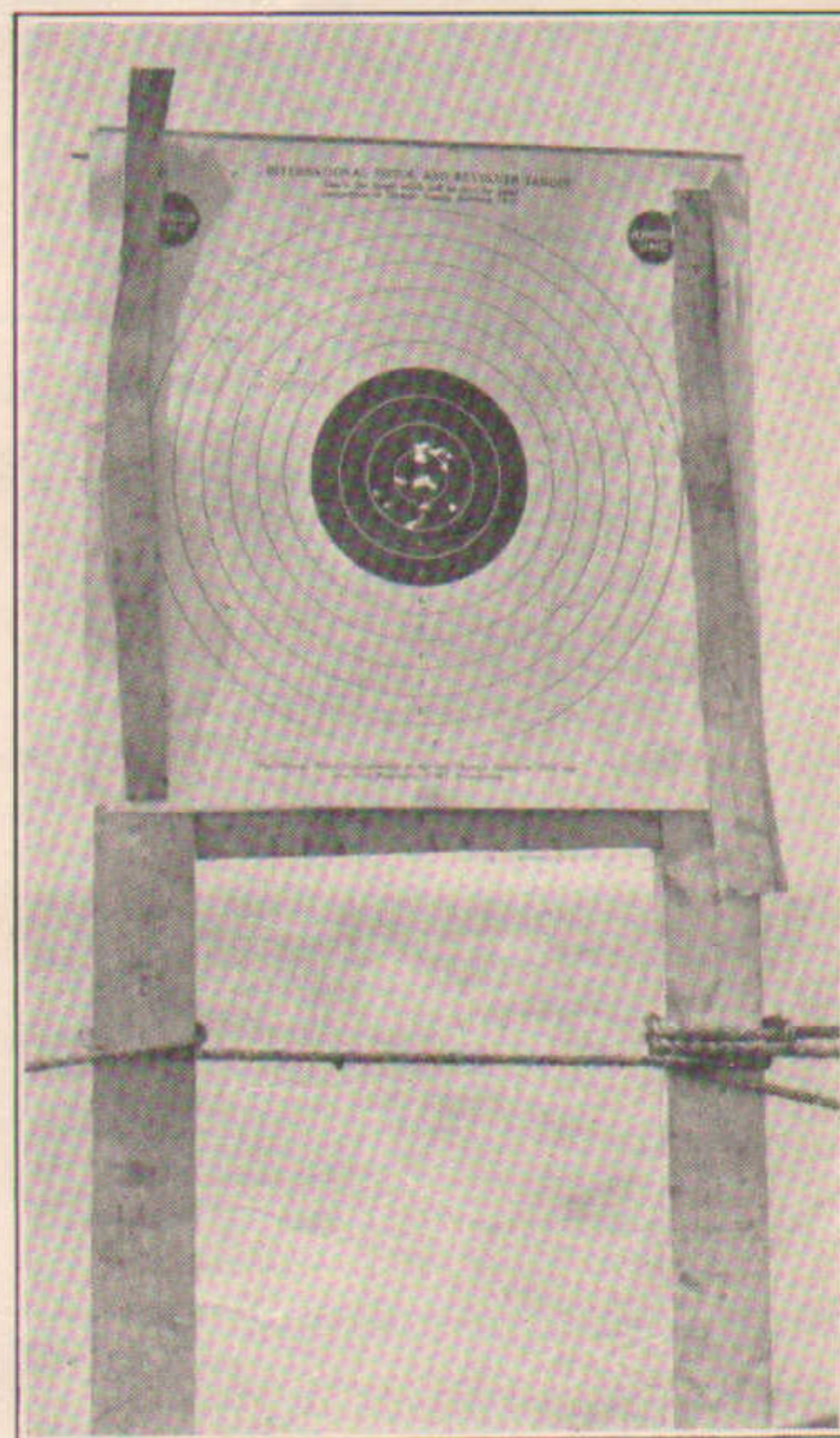
"I am ready to wager 25,000 francs that a man on the United States Team will beat your Belgian champion; or better, I will wager the same amount that there are two men on the United States team whose scores will be higher than that of your man."

The promptitude with which the bet had been offered led the Belgian to hastily seek out certain of his fellow countrymen, and after the conference, at the suggestion of the Belgians, the wager was made for a case of champagne instead of the 25,000 francs, and was duly recorded.

A week or more passed, and then on the night when the prizes were distributed to the victors in the hand-gun matches, the American who had laid the wager was host at the consumption of a case of rare wine.

Not only had two of the Americans beaten the Belgian Champion, but every member of the United States Team surpassed his score!

With three first prizes, a second and a third to their credit by wide margins, the United States Pistol and Revolver Teams are back from Antwerp. In the team matches where it was possible for a team to take only one place, the United



"A target was lashed to the rail aft."



The U. S. Olympic Pistol and Revolver Team. Back row, left to right: Bracken, Snook, Bayles, Frederick and Fiske. Front row, left to right, Kelly, Baker, Maj. Snyder (captain and coach) Lane and Harrant.

States made a clean sweep. In the Individual Matches, where a single team might have won first, second and third places in each—or a total of six places, the Americans had taken three. In other words, five out of eight possible winnings had gone to hand-gun men from the United States.

In looking over the scores of the 1920 Olympic Pistol and Revolver Matches, one is impressed by the fact that while heretofore a victory by 10 or 12 points in a team match has been considered a wide margin, the 50-metre match this year was taken by a difference of 85 points, and the 30 Metre Match by 27 points.

The official scores in the Olympic pistol and revolver matches show these results:



Practice near the old Belgian Fort: Lane, Bayles and Bracken on the line.

Team Match, 50 Metres, (five-man teams, 60 shots per man).

1. United States.....	2374
2. Sweden.....	2289
3. Brazil.....	2264
4. Greece.....	2240
5. Belgium.....	2229

Individual Match, 50 Metres (60 shots per man).

1. United States, K. T. Frederick, World Champion, 1920.....	496
2. Brazil, Senor Da Costa.....	489
3. United States, A. P. Lane (World's Champion, 1912).....	483

Team Match, 30 Metres (five-man teams, 30 shots per man).

1. United States.....	1310
2. Greece.....	1293
3. Switzerland.....	1270
4. Brazil.....	1261
5. France.....	1239

Individual Match, 30 Metres (30 shots per man).

1. Brazil, Senor Papeuse.....	274
2. United States, R. C. Bracken.....	272
3. Switzerland, M. Zulaup.....	269

America's Olympic pistolmen were every bit as determined as the riflemen to come home from Antwerp with colors flying, but unlike the members of the rifle team they had little opportunity for practice after the team had been picked at Quantico. Within a few days after the selection of team members had been made, the transport *Pocohontas* sailed, and between the time that the tryout closed and the hour when the steamer took the tide, there was much for every member to do in the way of preparation. Therefore when the team was fairly started down toward Fire Island there was every prospect of a long voyage with the matches crowding in close upon its termination. But the team found a way out of its difficulties.

Practice in marksmanship on board ocean liners is not a common occurrence. In times past teams going abroad have indulged in "dotter" practice and similar expedients to keep the trigger finger limber and the "hold" secure, yet such systems did not appeal to the Olympic pistolmen. Actual practice they

needed and actual practice they determined to have; whereupon word was passed forward for "Chips" the ship's carpenter, and with the ragged skyline of New York less than 24 hours behind them, the team began a daily routine of actual firing upon a target lashed to the rail aft, where the bullets would have the whole Atlantic in which to expend their energy. On this 20-yard range, the team assembled the second morning out and undertook the unique task of establishing co-operation between hand, eye and the roll of the wallowing *Pocohontas*. The first trials were disappointing, but the first few strings on the morning of the second day's practice showed promise that the plan would prove practical, and by the third day each man was making scores which compared favorably with previous performances on terra firma. There was one feature apparent in the shipboard practice: the men fired more rapidly than they otherwise would have done, for it was necessary to let off each shot in that brief moment when the transport reached the lowest or the highest point in her wallowings, and hung steady for a few seconds before taking the upward, or the downward swing. From 9 to 12 every day the team gathered for its regular practice all the way across.

Eleven days out from New York, the pistolmen landed in Antwerp on July 17, and set about locating a practice range. They did not follow the riflemen into Germany. Instead they received permission to practice near an old Belgian fort, some miles outside of the city, where the Belgian Artillery was then in camp. They made the journeys to the range in a machine-gun truck which had been placed at their disposal, constructed portable target frames of American design, and shot the Olympic course from July 18 to July 24, when the team members reported at Beverloo.

During the practice shooting, it developed that the American shots were in excellent trim. As an example, the average for five days of practice preceding the departure of the team for Beverloo gave Lane 510.8 points out of 600, Frederick 491.8, Bracken, 491.4, Snook 486.6, Kelley, 475, Fisk 470.6 and Bayles, 458. These scores at 50 metres, on the Olympic target. These scores, compared with the records fired at Quantico, on which the team was picked demonstrated that the practice had counted for a good deal, as in the

tryout, Lane was high with 500, Frederick second with 491, Bracken third with 482, Bayles fourth with 474, and Fiske fifth with 473; the tryout scores, incidentally, having been considered excellent shooting. The 30-metre practice was of quite as high a grade.

When the American team reached Beverloo, it was learned that the type of pistol target frames in use on the Belgian range were at best makeshift affairs; the American team brought its frames along, and were accorded permission to use them, installing them whenever a match was in progress.

The pistol program at the Olympic Games started off with the most important number—the 50-metre Pistol Team Match. The contestants began firing early in the morning of August 2. It having been noticed that the range was calm during the early morning hours, and that the winds appeared about 11 o'clock, the Americans arranged to begin shooting as soon as possible, and elected to shoot the team match first, with the individual to follow.

From the first shot, the American team put up an excellent score, but after each man had fired fifteen of the required 60 rounds, it was noticed that something had gone amiss with the range. Either the distance as measured for the Brazilians who were shooting next to the American team was incorrect, or the American range was wrong. With shooting temporarily suspended the attention of the range officers was called to this apparent discrepancy, and a re-checking of the range showed that the Brazilians were shooting at 45 metres while the Americans were shooting at 55 metres. Steps were immediately taken to correct this condition, and the Americans were told that in view of the fact that they had been shooting at a greater distance than required, their scores might stand. The Brazilians, of course, would have to shoot over. Under these conditions, the United States Team elected to start fresh, and the shooting was resumed.

Making the corrections in the range, however, had consumed considerable time, and much of the golden still hour had gone, with the result that on the shoot-over, the United States Team fell 32 points off the score they made in their first fifteen shots. The wind during most of the shooting rose steadily from inconsequent puffs to a steady 12-mile rate. The shooting finished about 1 o'clock in the afternoon.

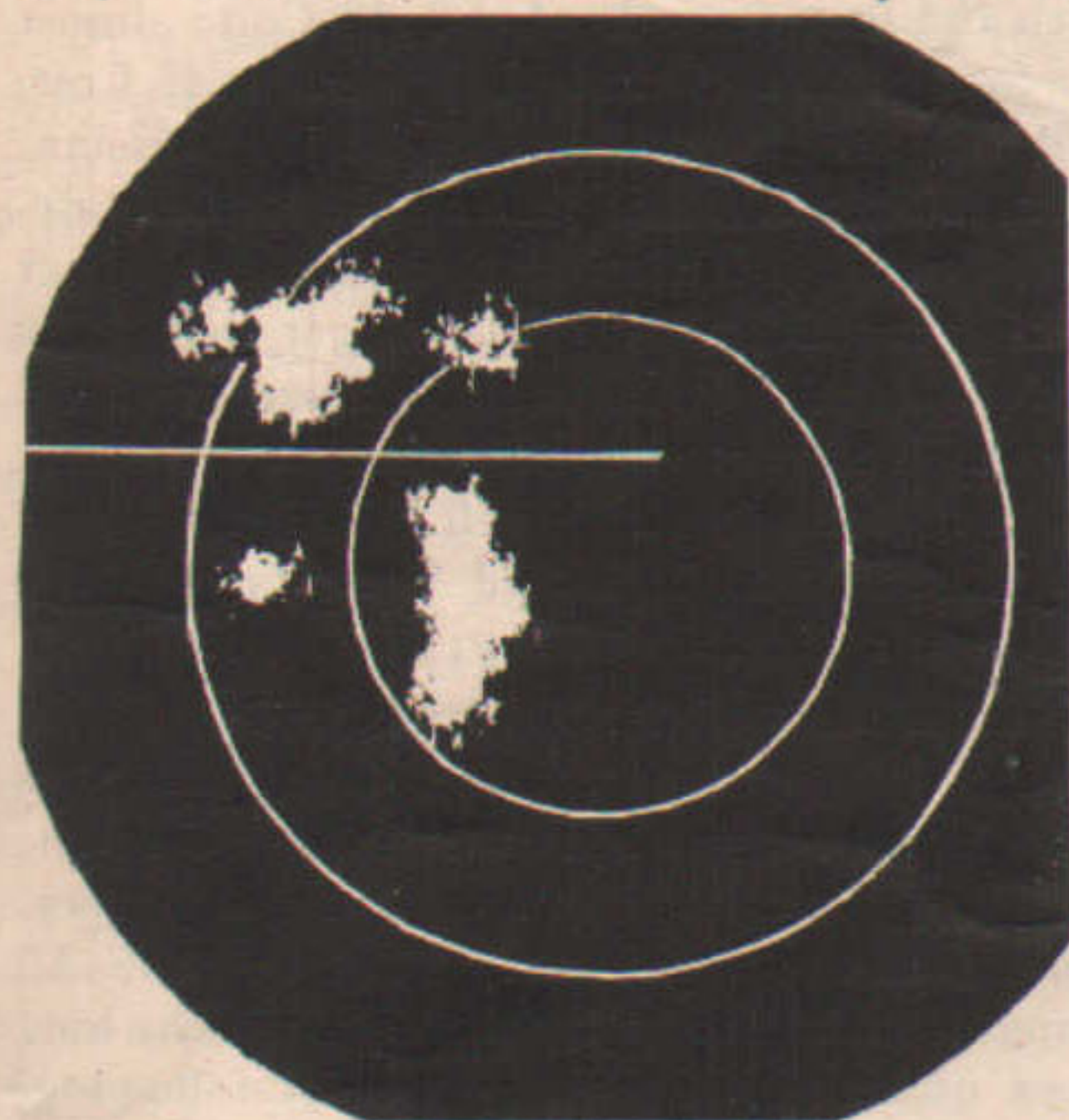
In spite of the effects of the interruption and the shoot-over, the American score—2374 points out of 6,000—was way ahead of that of the nearest competitor, Sweden with 2289 points. In this event, the average of the American team was 474.8, which means that man for man the United States outshot Sweden 17 points. In shooting the 50-metre match, three of the United States Team used Smith and Wessons and two used Colts. The Swedes, to a man, pinned their faith on cumbersome 10 or 12-inch barrel target pistols which were miniatures in many respects of the heavy Schuetzen rifles of Europe. These pistols were fitted with stocks carved to fit the hand. The Brazilians, who finished third,

(Concluded on page 9)

Those Relined Twenty-twos

By VAN ALLEN LYMAN.

FOR SOME time past the shooting fraternity has been hearing of "relined .22 calibre rifle barrels," and in this day of high prices it is a subject of considerable interest. Is relining just a makeshift, or is it really worth while? What accuracy can be



Two 5-shot groups at 50 yards, Relined Ballard rifle, telescope sight, sandbag rest. Hazy light, darkness coming. Shot by V. A. Lyman.

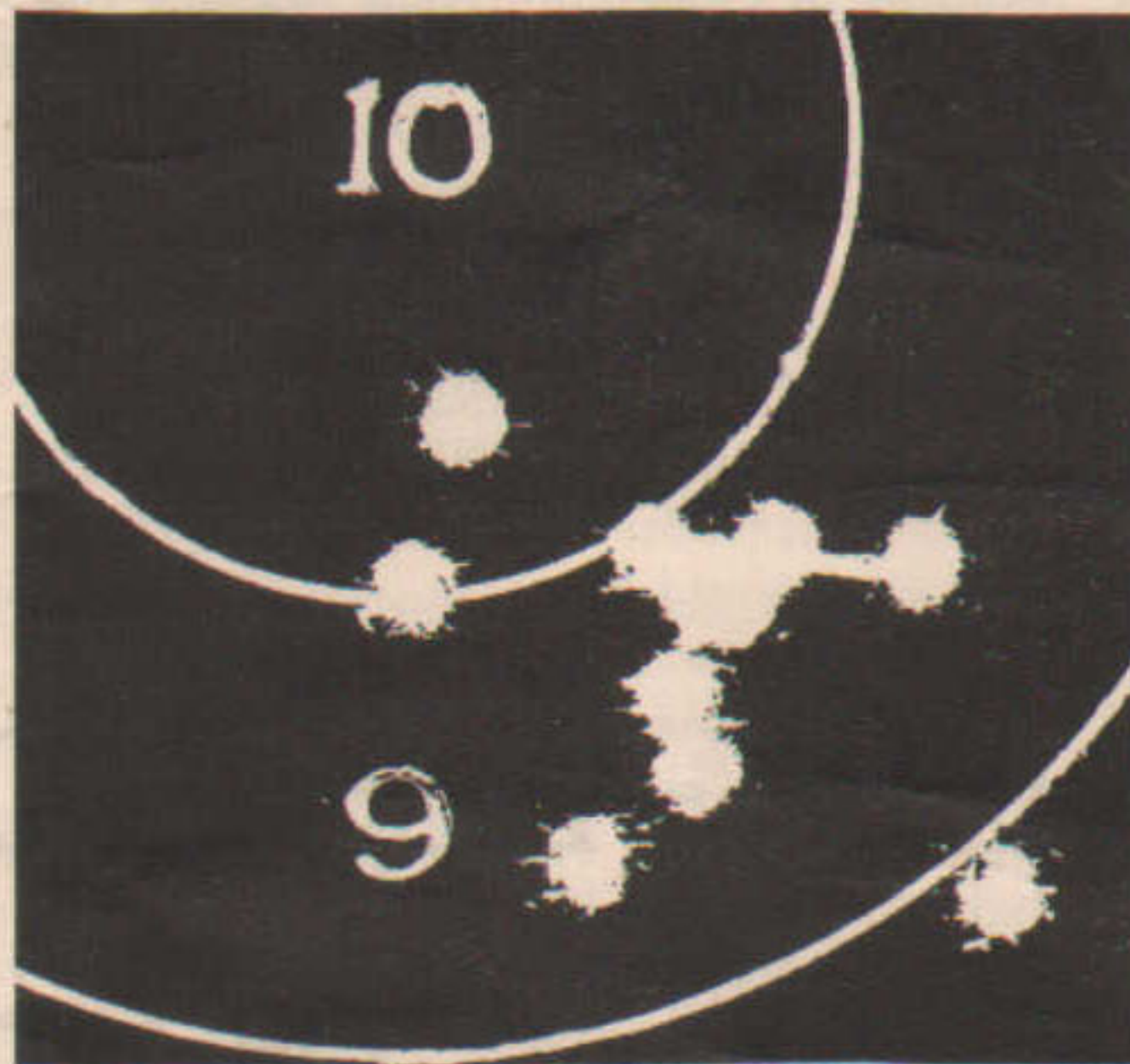
expected? If it is good, how much does it cost? These are the questions which naturally come up, and to them the writer would make reply from personal first-hand experience.

Relining consists of running a drill through the barrel and greatly enlarging the bore, to somewhere around half an inch in diameter, and inserting in this a rifled steel tube. The idea is an old one. England fixed over a lot of obsolete Martini rifles in this way for her civilian small-bore clubs and they shot well too.

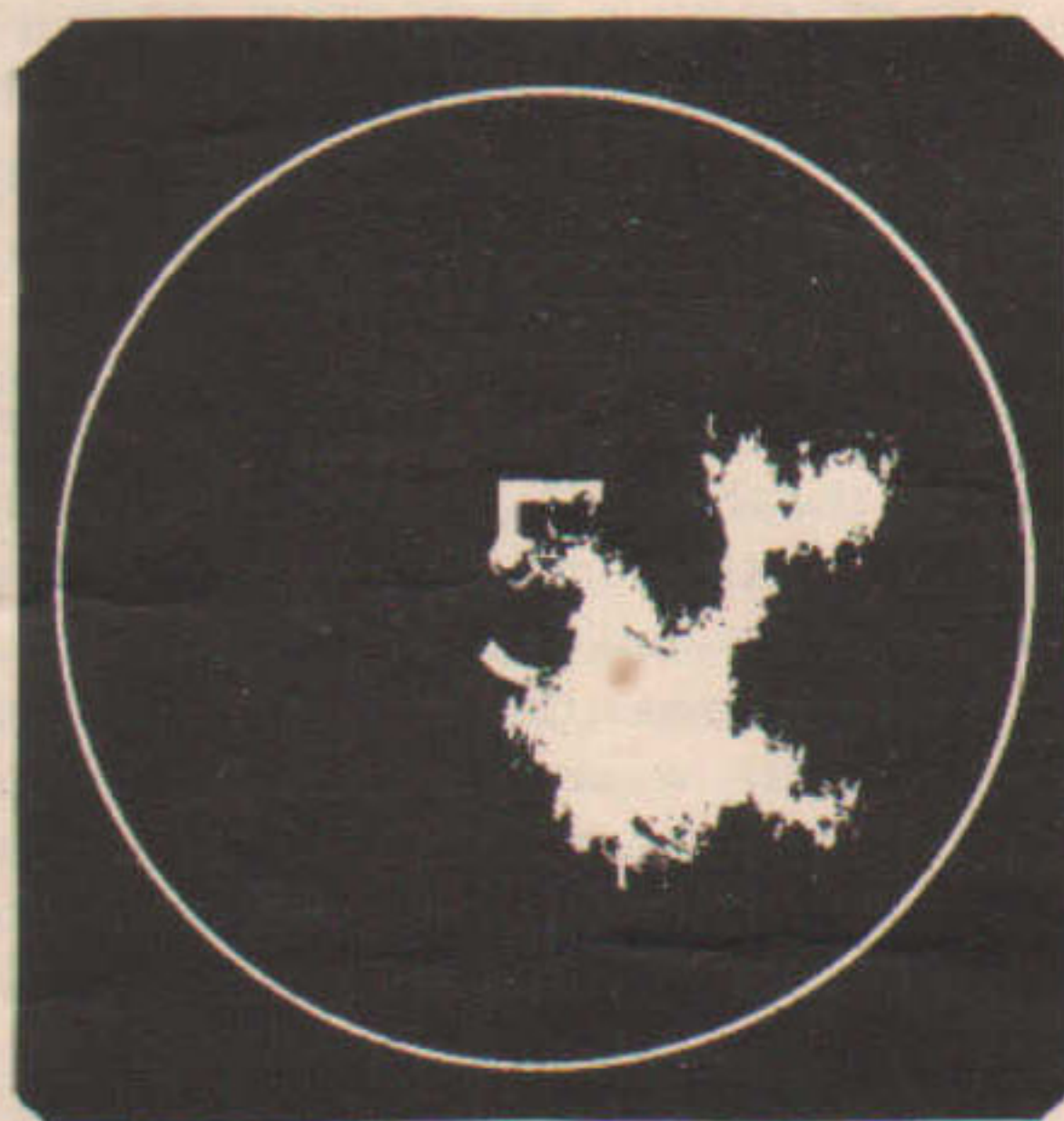
Some time ago an advertisement began to appear in *Arms and the Man*, stating that barrels could be relined at a cost of \$5.00 each. The writer sent on an old Ballard for relining with the request that good work be done on it, for the arm would be shot on a range where it would have a chance to show what it could do before a critical audience.

In due time the gun came back and it certainly was a pretty looking job too, the rifling had five lands and grooves and the tube was so nicely set in the bore that there was no sign of a joint. But the gun simply didn't shoot as well as the other target rifles. The investigation committee got busy, cleaned the barrel scrupulously, oiled it very slightly with light oil, and then took a bullet and entered it at the breech and pushed it through slowly with a solid heavy cleaning rod. *Carramba!* a little tight at the breech end and looser toward the muzzle! A second bullet, pushed from the muzzle to the breech verified the tale of the first. Well, it was just a case of correct it, which was done in about half an hour, without much ceremony, and in the easiest way.

There was a package of Acuin handy, that fine grit for razor-strops which is furnished with every can of a certain shoe oil. A cleaning rod with slotted end was run through the barrel from muzzle to breech and a piece of gauze bandage of such a size as to make a very tight fitting patch put in the slot and oiled and this drawn into the barrel. The patch formed into a sort of slug because of its tight fit and showed the impression of the rifling after it was pushed out. The patch was then rubbed with Acuin—"charged with abrasive" a machinist would say—and worked up and down in the barrel in the tight places. It was charged twice and had a total of about fifty rubs, this was all there was to it and a second test with a lead slug pushed through showed that the barrel was of equal diameter throughout. A gunsmith would probably have fixed a lead plug on the end of a rod, charged that with finest emery and proceeded to 'lap' the



Ten consecutive shots at 100 yards by Leo Johnson. Group is one and five-eighths inches between centers. Relined Ballard, rear peep, military front sight shaded, sling prone, no rest.



A group at 50 yards by Leo Johnson with the Relined Ballard.

barrel out in most approved style, but the results could have been no better than those

obtained from the rough and ready way in which the job was actually done.

Now gentlemen, hush and listen. We took that old Ballard out, vintage of around 1870 or so, with the 1919 intestinal tract, and we shot it, Leo Johnson and I, but mostly Johnson. I stood by and admired. At twenty-five yards the rifle made most beautiful one hole groups, all the shots cutting a ragged hole not over a half-inch in greatest diameter.



Relined Ballard, 25 yards, sling, prone, without rest. Peep rear and hooded front sights. Shot by Leo Johnson.

At fifty yards it made two groups that could be completely covered by a nickel and plenty that could be covered by a quarter, and at a hundred yards a ten-shot group one and five-eighths inches in diameter. All before witnesses, and the editor of *Arms and the Man* has the targets. Before criticising these groups go out and make better ones, take any rifle you choose. Diller's five dollar job was strictly all right, it just needed a little finishing touch.

It wasn't until the writer visited Wundhammer's old place in Los Angeles, now run by Ross C. King, that he saw how the work was done. The tubes, a good many of them anyway, come from the B. S. A. people over on the other side of the pond, already rifled. The rifle barrel is bored out as described and the inside of the barrel and outside of tube coated with ordinary solder and the tube shipped in while everything is hot. It makes a beautiful tight job, of course, and inquiry among other well known gunsmiths indicated that this is the accepted way of doing the work. It remains but to cut off the surplus length of tube sticking out of muzzle and breech, finish the muzzle, chamber and make extractor cuts at the breech, and the job is done. King uses the B. S. A. tube having eight lands and grooves and gets \$7.50 for his work, beautiful work it is too. There are, of course, other people as well who do relining but, as previously stated this article is being confined strictly to first hand knowledge.

Will a relined .22 invariably shoot as well as the one described? Frankly, they won't always. The quality of the shooting will vary with the quality of the tube and the skill
(Concluded on page 20)

The Lost .40

By W. M. PUGH

S AID Sergeant O'Ferrall in an off duty period to his bunkie, "What's in dates? 'Seeds' you say, bunkie? Righto! But then its as to times I speak. What will I know at me death day? What did I know at me birthday? Thinking being left out o'thim two important dates, what's the use o'thinking at all?" And so say we all of us concerning the date setting the beginning of the facts now set down. "Let's not bother; sometime, say, in pre-war days"—giving the tale this mystery smoke screen—"Let's go."

A conversation starts the wheels turning; taking place at an informal lunch in factory-ville between just two gentlemen, big boys in munitions—in fact, department managers—the one in a rifle plant, the energies of the other being absorbed in a leading cartridge works. Such talks may not always with propriety be reported, sometimes it's trade secrets being discussed. This once, however, its open shop and free to all friendly palaver indeed and quite interesting to shooters, the subject in general being cartridges.

Passing over much that was said about many of the small arms cartridges for rifle and revolver, they were found in agreement concerning the merits of the .30-06 rifle cartridge and each expressed regret, that it had to date, no fitting mate in the line then made for various revolvers, automatics and heavy single shot pistols. Of course they praised the punch of the .45 Colt single action, the speed of the Colt .38 auto, and the accuracy, plus, of the S. & W. Russian; excellent each one of them in its particular sphere, yet none of them uniting all the essential factors needed in a first class cartridge for heavy one-hand guns. Later on, in fact about adjournment period, a date was set for another meeting and eating, in the hope that they might find something definite to go on in possible search for this missing link in the pistol cartridge chain.

Soon enough these two discovered that to initiate and build up, even in theory, a winning pistol cartridge needed a great deal more time than a daily lunch gab-fest. Then they made arrangements to meet at nights convenient to each and collaborate in this task, already threatening to become sizable. Fortunately, each had quite a lot of data under his brain pan related to some of the information required. This being disposed of all too soon, they had recourse to their factory files. Delving deep they turned up much of value to guide them from the pens of such leaders as Mann, Bennett, Whelen, Crossman and others. Much of this was worked over and checked against what they already knew. All of these facts and fancies being boiled down gave just one answer; their cartridge was to be calibre .40, an alloy bullet of Anderton type, say 205 grains, with a suitable smokeless charge.

An experimental arm had next to be produced, one that might be changed in barrel

and chamber quickly if need be. Mr. Manager in the rifle plant took this for his special job, reporting in a few days some progress on the part of his chief mechanic, to whom he had assigned the work. Early the next week found this work finished in the shape of a Remington Navy single shot action of .50 calibre, the old barrel removed and a new one mounted, bored and chambered for a certain sized cartridge of about .40 calibre. The barrel was six and seven-tenth inches long, exact calibration to bottom of grooves being .393 and a rifling pitch of one turn in fifteen inches.

Meantime a box of the new cartridges had been made up at the other plant. The tests following these new-thought products seemed quite satisfactory from the first trial; then, after slight adjustments, a report of the extra work was made at the two factories; then orders for a full test in presence of leading authorities; all of which took place on the day set, resulting in a splendid report praising the earnest efforts of these two munitions chiefs. And such a report just had to be written.

The firing was of course from machine rest, on regulation targets, twenty and fifty yards; first having made a trial at chronograph, getting down to correct figures for speed and foot pounds, with a reported average of 1055 foot seconds and a trifle over 450 foot pounds.

"This is splendid, splendid indeed, boys," said an old army colonel, present with official authority. "Why, boys," he continued, "we find de Palma speed and Jack Dempsey punch; also, I note T. K. Lee accuracy." And so it went, with many favorable comments exchanged. The twenty yard target, be it said, showed one ragged hole for its splendid group, with but little larger dispersion at the fifty yard firings.

Here then was a winner, a pistol cartridge with the foot seconds of the .38 Colt; almost the foot pounds of that big brute the .45 Colt; and the accuracy of the S. & W. Russian; everything arrived at just as the workers desired from first initiative; and such a compact looking cartridge, very little larger than a .38 auto, in fact, just sized and shaped correctly for a military auto magazine, not at all bulky, just a reasonably sized shell full of condensed power, ready to be loosed from its designed engine as a victorious baby; and then?

Yes, a new paragraph had to be started, after a long pause; the fact being that the next happening was a loud bang! Not the cartridge plant, mind you, nor the rifle factory. No! Just the world war. That was all! All things new had to go by the board in the long days of rough and ready tactics following; new things could find scarcely a friend; and amid all this hurly burly, exit our little friend the .40 pistol cartridge. And now as "The Captains and the Kings depart" perhaps there may come a redivivus, and so the end, with a Mexican shrug and "Quien sabe—who knows?"

Indoor League Conditions Should Be Changed

By AL BLANCO

DURING the 1919-20 N. R. A. Indoor Small-Bore Rifle Shooting Season so many possible scores were made by competitors that it became obvious to nearly everybody a change in conditions for future matches would be necessary, if interest were to be preserved or stimulated.

When it becomes necessary to make it more difficult for the shooter to make the maximum score, the practice has been to reduce the dimensions of the bull's-eye or highest scoring center, or to increase the range. Neither of these expedients seems practical for indoor shooting. To decrease the size of the present bull's-eye would be to increase eye-strain for the shooter. To increase the distance would prevent practically all clubs from shooting for the obvious reason that it is difficult enough now to secure suitable indoor range sites for the present distance of 75 feet.

So we are up against it, apparently, to discover some way to cut down the possibility of the possible.

Having spoken to a great many small-bore men on this subject, and getting no practical suggestions, we finally met one chap who thought he had the solution. His idea was to include an offhand score, that is to say, amend the present conditions to read 10 shots standing, 10 shots prone. This would undoubtedly turn the trick, but would increase the number of possibles made in the prone position.

The big idea is to do away with the possible score in the prone position. Frankly, we are personally bored to death to read in *Arms and the Man* that the possible score of 200 was made by 70 per cent of the competitors. We confess our inability to suggest a remedy, but undoubtedly there is one hidden away somewhere among the many competitors who shoot in these annual matches.

It is time something was done if these annual contests are to continue, otherwise they might as well be discontinued and the time and money spent somewhere else.

Small Calibre Experience

By RIPLEY

IN THE Upper White River country of the Yukon my first acquaintance with small calibre high power rifles was made. Two wealthy sportsmen in search of trophies parted with two that had never been used and a quantity of shells to two hunters, myself and my companion, who had exhausted their supply of cartridges for larger calibre rifles, and on account of their meager supply of funds and an ineradicable love for solving the problems of the wild alone were there. We were without guides and what was generally agreed on as proper outfit. Still we made it all right and then later footed through New Brunswick the next fall under the same inspiration and deficiency of capital.

Altogether we became lovers of the small calibre rifles and came to the conclusion that many objections to them were from poor hunters and men too lazy to stalk game properly. The large calibre rifles are ideal arms if you want them. And if you care for the little fellows and will give them the opportunity they will perform faithfully. He who fancies either kind is right.

In our ramblings we hunted a great deal with the typical visiting sportsman, as well as their guides, and strangely it caused us to sit up and take notice of things that were impressing us constantly. The majority who had heavy calibres secured no more game than we. I am positive not a single occasion could we be accused of having wounded game pull away from us and lose it.

One thing was most noticed: When climbing altitudes and we arrived suddenly on game the other fellows failed to make kills very frequently with the same opportunities we had, though in camp at a target they showed us up badly and had great amusement at our hunting without sights. But one thing or another caused them to fail on game. But when it came to talk on U. S. ordnance they could tell it in a streak; they knew the potentials of every rifle made—velocity, trajectory, pressures and everything else they were well informed about. But they were not hunters. So Bob and I agreed that the requirements of ordnance are a lot different from game shooting though we were not posted on every reason why it is.

There was the chief expert on the ordnance subject that could lay on his belly near camp and hit that small beef tin ten times to our one. He just perpetually ridiculed our old southern deer shooting habit of snap shooting and doing without sights. But he could not hit a running goat at two hundred yards to save his life. He missed several standing almost as close, as well as other game we had stalked carefully for a long time. Invariably when we came close to game he was breathing as hard as a running red fox dog. He used a very heavy rifle of large calibre. No other kind would he have for White River game. After a climb he was nervous. His hands

trembled, and he could never hit anything when the going was rough and the job had to be done at once or not at all, and he missed cleanly two big brown bears that Bob Hall slammed over with a despicable small calibre arm. The mining recorder at White River reported that he had noted similar occurrences.

The first caribou I ever saw or ever saw killed was done with a .22 high power by a prospector who had secured it from a visitor from the states. He swore by the little arm and told me of the moose and bear he had killed with it. His advice was "stalk your game and with any reasonable distance any high power will get you meat provided it is held on the right place. I have found lots of large game that had been hit with heavy slugs of lead that got away.

My first kill of a deer with a .22 high power rifle was an accident. I had not the least idea of hitting. But this big whitetail was being driven by the hounds of a bunch of Cincinnati German hunters. The dogs put it in Current River above Tunnel Bluff, and when in the center it started to cross a bar from my position on Gooseneck Bluff, I determined to turn it from its course at all hazards. It was deliberately headed for a stand where I knew two ten-gauge shotguns loaded with buckshot awaited its coming. From where I was I had no idea of hitting it. I blazed away in the general direction of the whitetail. To my amazement it dropped dead on the bar without any subsequent struggle. On examination I discovered that for some reason the bullet did not mushroom, but for an inch to two inches from the point of entry quite close to the left eye to the place of exit the bone was ground up fine like pulverized glass.

Down about the Sunken lands—or to be more exact, in the scatters of Little River, east of Hornersville I had quite good results with the same rifle on deer and also killed a bear of good size. But the shot at the bear was quite close, within 35 yards, and it simply laid down and spread out after being hit as though it had been instructed to pose the part of a rug.

With the .250-3000 I had most luck. It was the arm brought down from the White River country and the one that familiarized me with the killing powers of the little fellows on large game. The first moose I killed in New Brunswick crashed dead in the cedar pool just after it stepped out of the shadows unheralded, a swart truculent monster, indescribably majestic in appearance. And yet at every camp I passed on the canoe route the sportsmen laughed at my arm and its lack of sight, as well as remarking on the folly of hunting moose with anything but their expensive, beautifully balanced Mannlichers.

The last arrival among the high power small calibre rifles, the bolt action .250-3000 derived its first experience, as far as I can learn, on game in my and my boy's hands. Always a

lover of light weights and shotgun balance, it instantly appealed to me, irrespective of its makers or anyone associated with its origin.

Two timber wolves I killed with it on the first day—two big fat thick pelaged bitches that were quite a ways off and were going at a good clip, as a big bunch of Walker hounds were sending them along. An incomer changed ends when struck with the soft point, and momentarily, as it were, stood on its head before dropping dead. The second one was a right quartering black bitch, very heavy in flesh and coat. The force of the bullet caused it to spread out flat and skid along on its belly without movement of its limbs over the red mud in the center of an old tram road for about 5 yards. The manner in which three ribs were smashed would relieve any doubts what it would do on larger game.

Then at a beef shoot very near to Oxly, Missouri, it was accorded an opportunity on a full grown range steer. It was another case of similar smashing.

My boy killed his big black bear—the first he ever saw wild—with the new bolt action .250-3000 in the cane breaks of Logan creek. It was a quartering shot, a vertible rib breaker. But the interesting point was at the point of entry the bullet parted company from the metal jacket, leaving it almost intact in cylinder shape, yet spreading and smashing bone until it found lodgment near the heart. This kill, however, was accomplished within 60 yards.

Always loath to attribute miraculous killing powers to any arm irrespective of size of calibre I am obstinate in sticking to the notion that the part the hunter plays in stalking the game and where he places the bullet has most to do with the killing of big game.

And a good deal of the favoritism for certain rifles comes from the opportunities and association, no matter how large or how small a bullet it handles. Some people kill their ducks cleanly with a twenty gauge shotgun, with others it is simply a waste of game to let them hunt it with a twenty. And an apt analogy can be established with rifles when it is a question of game.

"And how," queried his best girl anxiously, "did you acquit yourself in France?"

The ex-doughboy looked disturbed.

"I didn't know you'd got wise to that," he answered. "I didn't acquit myself. They gimme two months."—*Exchange.*

"In case they send me up for long," said the old offender, facing his 'steenth court-martial, to his buddy, "look under my mattress and you'll find something I've been saving up for a rainy day. It won't do me no good, where I'm going. You can have it."

He got a six months' sentence and the buddy raced all the way back to the barracks to probe under the mattress. He found—

A shelter half.—*The Red Diamond.*

Lady Shopper: "Pajamas, size 36".

Ex-Supply Sergeant (in reverie): "Where's yer old ones? Gotta turn 'em in; gotta see yer old ones."—*The Red Diamond.*

ARMS AND THE MAN

1111 WOODWARD BUILDING, WASHINGTON, D. C.

SEMI-MONTHLY—ON THE 1st AND 15th DAY

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

THE INTERNATIONAL SMALL-BORE MATCHES

TWO American victories over the picked small-bore teams of England since the post-war revival of the Dewar Trophy Match, seems in no degree to have discouraged the British rifle shots and they are preparing to stage what they hope will be a heavy "come-back" in 1921.

In the Dewar Trophy Matches, the British have been good losers and clean sportsmen. To compete with them has been a pleasure to American riflemen. It is to be hoped that these contests will be held, without fail, every year, and that other countries will enter teams.

The Dewar Trophy Match at present is far and away the most important and attractive event in our small-bore shooting program. It calls for the highest degree of skill and the fact that the English small-bore shots are worthy antagonists guarantees that each year's contest will be interesting for all participants.

As the result both of intent and circumstance, the Dewar Match has become the apex of the annual small-bore competitions held in connection with the National Matches. When, in 1919, it was proposed to revive the Dewar competition which had been dormant through the long years of the war, and to make it an out-of-doors competition, it was logical that it should have been staged on the National Match Range. There and only there was it feasible to gather a sufficient number of good shots at the same time, to defend the trophy. It was also logical under the circumstances that the American

team should have been picked from the ranks of the small-bore shooters who had come to Caldwell to enter the events which had been instituted that year on the small-bore range. It then followed naturally that the better shots in the general competitions had the better chances for winning places on the International Small-Bore Team and that the tryout for the Dewar Match logically followed the Small-Bore National Individual Match.

As a result of these circumstances there has arisen a close relationship between the annual small-bore matches of the National Rifle Association and the Small-Bore International Match, which through two shooting seasons, at least, had proved highly satisfactory. Many of the best small-bore shots in the country have attended the National Small-Bore Matches, and from their ranks have been selected the two teams whose members have kept the Dewar Trophy in this country.

That it is impossible for every aspirant for international small-bore honors to be present and participate in the tryout for the Dewar Matches is to be deplored as a matter of principle. It is doubtful, however, whether any stronger team, than those of the past two years, would have resulted had every small-bore shot in the country been brought to some central point and there shot out the question of team personnel. It is pretty safe to assume that every rifleman who sincerely and sufficiently deeply desired to try out for the Dewar teams found a way to do so.

A letter recently received by Captain E. C. Crossman of the 1919-1920 Dewar Teams, from Frank Carter, secretary of the Society of Miniature Rifle Clubs of Great Britain reads in part:

"I received the official scores made by your team in the Dewar Trophy competition from Mr. E. Newitt, and am taking the first opportunity to congratulate your team upon its victory.

"Although we have reduced your winning margin by ten points, I notice that one of your competitors lost a shot at 50 yards; Mr. Newitt mentioned that this was key-hole shot outside the ring. Otherwise the winning margin would have been the same as last year. It is a peculiar co-incidence that our team, when shooting for their places in the final trial on the day previous to the match, put up exactly the same score as your record total, but the conditions on the day of the match were far different from those during the trial.

"I am by no means disheartened and we are hoping to run a new series of trials during the next eight months and obtain some better rifles and ammunition so that we can give you a much closer run next year."

AT ANTWERP WITH THE HAND-GUN.

(Concluded from page 4)

started in with a very poor equipment. Seeing that they were badly handicapped, the American team loaned them one of the new Colts target pistols and in the record shooting, four of the Brazilian team used this weapon. The fifth man used a heavy Schuetzen pistol. In the 50-metre match, the Brazilians improved their customary average scores more than 20 points per man.

Following the 50-metre team match, the 50-metre individual was shot. It was possible to elect to record scores made in the team match so that they would count for individual honors, and Frederick, Lane and Bracken, of the United States aggregation followed this course. Bayles and Fiske, the two medicos, shot individual records.

In the team match, Frederick had been high man, scoring 496 points out of the possible 600, while Lane had been officially credited with 483 points and Bracken 456. In the individual scores, none was found that was better than Frederick's 496, upon which total he was declared Pistol Champion of the World for 1920. Senor da Costa, of Brazil, however, shooting the borrowed Colts, hung up a score of 489 which was 3 points better than the record on which Lane stood, and which gave the Brazilian second place.

The detailed score which won the world's championship, was:

K. T. Frederick:

First string: 10,9,9,9,8,8,8,7,6	83
Second string: 10,10,9,9,8,8,7,7,6	83
Third string: 10,9,9,9,8,7,7,6,6	80
Fourth string: 10,10,9,8,8,8,8,8,7	85
Fifth string: 10,10,10,8,8,8,8,7,6	83
Sixth string: 10,9,9,9,8,8,7,7,6	82
— 496	

The scores of the other members shooting in the team match are:

A. P. Lane:

First string: 10,9,9,8,8,8,7,6,5	78
Second string: 9,9,9,8,8,8,7,5	80
Third string: 10,10,9,9,8,7,7,6	82
Fourth string: 9,8,8,8,8,7,7,6,6	75
Fifth string: 10,10,10,9,9,9,8,7,6	87
Sixth string: 10,10,9,9,8,8,7,5,5	79
— 483	

Dr. J. H. Snook:

First string: 9,9,8,8,8,8,7,7,6	77
Second string: 10,9,9,8,8,8,7,6,6	80
Third string: 9,9,9,8,8,8,7,6,5	77
Fourth string: 10,10,10,9,8,7,7,5,5	78
Fifth string: 10,9,9,9,8,8,7,7,7	83
Sixth string: 10,10,9,9,8,8,6,6,4	76
— 471	

Sgt. M. Kelley:

First string: 9,8,8,8,7,7,4,2	68
Second string: 10,10,10,9,9,8,8,7,7	87
Third string: 10,10,10,9,9,8,8,7,6	86
Fourth string: 10,10,10,8,8,8,7,6,4,3	74
Fifth string: 10,9,9,8,8,8,6,6,5	78
Sixth string: 9,9,9,8,8,8,7,7,6,4	75
— 468	

R. C. Bracken:

First string: 10,8,8,8,6,6,5,5,3	65
Second string: 9,9,9,9,8,7,7,5,5	77
Third string: 9,8,8,8,8,7,7,6,5,5	71
Fourth string: 8,8,8,8,8,7,7,6,4	71
Fifth string: 10,9,9,9,8,8,8,7,7	84
Sixth string: 10,10,10,10,9,8,8,8,7	88
— 456	

In the 50-metre Individual, Dr. Fiske hung up a score of 458, while Dr. Bayles scored 470.

The 30-metre Team Match—military revolvers, 30 shots—was fired on August 3. When the shooting began, a breeze from 6 to 8 miles in velocity held over the range, increasing gradually to 12 or 14 miles. There was no trouble over the range distance on this occasion.

In this event, two of the U. S. team used Smith & Wesson Military models and three used Colts Military Models. The Brazilian Team showed up at the firing-point with .38 calibre S. & W. Specials, equipped with adjustable rear sights, and were permitted to use them on the ground that they were issued to officers of the Brazilian Navy.

As in the 50-metre match, the United States won on the wide margin of 1310 points against 1285 of its nearest competitor, Greece. As in the previous match, certain members of the team elected to have their scores stand for record in the 30-metre Individual. These included Lane, with 263, Frederick with 262, and Harant with 268. Bracken and Bayles shot separately for individual honors. Bracken scoring 272 and Bayles 244.

First place in the 30-metre Individual was won by a Brazilian, Senor Papeuse, on a score of 274 which topped all the American totals, leaving Bracken in second place on a score of two points lower.

The scores in the 30-metre team match were:

Lt. L. J. Harrant:

First string: 10,10,9,9,7,10,10,10,9,8	92
Second string: 10,9,9,9,8,10,9,9,8,8	89
Third string: 10,9,9,8,8,10,9,8,8,8	87
— 268	

A. P. Lane:

First string: 10,10,9,8,8,10,10,10,6,6	87
Second string: 10,10,9,9,8,10,9,9,9,8	91
Third string: 10,9,9,6,6,10,9,9,9,8	85
— 263	

Karl T. Frederick:

First string: 10,9,9,9,8,10,9,9,8,8	89
Second string: 9,8,8,8,8,10,10,9,8,8	86
Third string: 10,9,9,9,10,9,9,8,5	87
— 262	

Dr. J. H. Snook:

First string: 9,9,9,8,8,10,10,9,9,9	90
Second string: 9,9,9,8,10,10,9,7,7	87
Third string: 10,9,8,7,6,10,10,9,8,7	84
— 261	

Sgt. M. Kelley:

First string: 10,8,8,7,7,10,10,9,8,6	83
Second string: 10,9,8,8,8,9,9,9,7	86
Third string: 10,8,8,8,8,10,9,9,8	87
— 256	

The Best from Contemporary Sources

SIGNS in plenty point to less use and popularity of the 30-30 type of hunting cartridges. For a long time they have been riding the crest of a false reputation for killing power—and wounding at least one animal that escaped for every one that has been secured. Light, handy rifles made for such cartridges and not in better

The Killing Capacity of Hot Lead.

calibres perhaps are chiefly responsible. There is the Winchester Model 94 carbine, weighing under six pounds, for instance, so light and nifty to carry that any hunter is tempted to close his eyes to its limited capacities and faults.

For the purpose of relating the following experiences and observations on killing power of bullets, big game hunting cartridges can be bunched in families as follows:

1. 30-30 and 30-40 class, high power, with about 2000 foot second velocity.
2. 38-40 and 38-55 class, low power, with about 1400 foot seconds velocity.
3. 250-3000 class, ultra-high velocity in small calibre.
4. 45-70 and 405 class, large calibre, heavy bullets at high or low velocity.

Classes 1 and 2 are unquestionably obsolete, class 3 is open to question, and only class 4 stands the continued test of all round experience.

For shooting hogs no one wants anything better than a 22 calibre rim fire rifle. It is only a question of enough penetration to go

through the skull bone and into the brain, with sufficient accuracy to hit the spot aimed at. In *Arms and the Man* it was recently stated by Colonel Townsend Whelen of the United States Army that Charlie Baker of New Brunswick uses that very 22 rim fire for killing deer and moose—makes a more or less regular practice of it. He shoots them in the heart.

But a butcher shooting a hog or a Charlie Baker spooking up unseen and unwinded on a bedded deer is a totally different proposition from the average hunter's shooting opportunities. Practically always we have to take our game on the fly. Mostly the location is among brush or timber. Sometimes we have to shoot over long range or not at all. As the country becomes more settled, these conditions are emphasized. Totalled up they mean that a good deal of our shooting must be done at the game and not at some particular spot in it, or at best we can distinguish only between front half and rear half of the body. To knock down the game—under those conditions—"anchor it," as Ross used to say in the advertisements, takes something just a slight suggestion of a shade more powerful than a 22 rim-fire bullet.

Friends of the 38-40, 44-40, 38-55 and 30-30 are numerous, but they must admit that they seldom make clean kills with one shot. It is done sometimes, when the bullet through luck or skill is directed to heart or head or running gears, but there is plenty of additional space on deer and bear and moose that often

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Contains score sheets suitable for all forms of small-bore shooting, so that riflemen can keep all their scores and records as to sight adjustment and weather under one convenient cover. The book also contains all the practical information necessary for expert shooting with any of the more popular or suitable small-bore rifles, and is based on actual firing by Major Whelen, and *not* on usual information as to ballistics, hence is *practical and reliable*.

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ARMS AND THE MAN

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WASHINGTON, D. C.

is hit without result except a wound. More often the 38-40 or 30-30 kill is made with a magazine full of cartridges and a few extra poked in after those are fired.

Old Sol Rooch is a half Indian now living in the States. He is a deer killer if there ever was one, having practically cleaned out the deer in two or three districts before authorities stopped him. Three or four years ago, as he humped his narrow back against a snowy west wind at a crossing, a bear tore through the brush within eight feet of him before he saw it. Four shots were fired, every one a hit—and the bear went right on. That is typical 38-40 work for you.

Then Sol sold his old Winchester and bought a 30-30. Almost right away he had bear shooting again, at 125 yards this time. How many shells he fired he never tells, and no one knows how many hits he made. But he didn't stop the bear. That is typical 30-30 work for you.

The writer can recall a goodly number of deer and bear shootings with these two classes of rifles. It is an actual fact that the game escaped wounded more often than it was killed.

Experience with very high velocity rifles of the 250-3000 class are more satisfactory. One of the nice things about them is that they seem to be able to drop game on the spot with a paunch or chest hit. Repeatedly it has been done by one or another member of our old hunting crew. Straight paunch shots with the 22 High Power Savage have accounted for two deer before my eyes. Chest shots, not touching the heart, with 22 High Power, 250 and 256 Newton, have accounted for several others in the same way. The bullets do not come out except in small pieces like No. 2 shot. It is quite a convenience,

this doing away with a long chase after such an unlucky hit. Two other deer were shot in such an angle that the bullets went into the neck, low down. No sticking was needed, or much more than severing the neck bones to get the heads clean off.

But these high speed little bullets do hog up a lot of meat, and they do fail to stop game hit on a heavy bone. A ham-shot on a bear or moose is worse than useless. On a deer it is little better. Even a shoulder shot on heavy game is not successful half the time. The 256 Newton smashes through bones better, of course, than the 22 High Power, but the point is that it belongs to the same class. It has done successful work where the bullet struck only meat or light bones and did not have far to penetrate, but when it runs against heavy bones or must penetrate more than a foot in game, it surprises you beyond words at its poor effect.

Purposely three cartridges of classes 1 and 3 have been left out of the discussion above owing to the real merit they display. They are the 35 Rimless in class 1, and in class 3 the 280 Ross and 30-1096 with 175 or 180 grain bullet at velocity of 2600 to 2700 feet per second. The 280 Ross with steel jacketed hollow point bullets is unreliable because sometimes it will be stopped in the flank of a small deer, and again go whistling through a big deer without much mushrooming even when bones are struck. But the Ross copper tube bullets have never yet failed for me. In practically every specimen of game hit it went clean through, and it left behind a tunnel big enough to attract the attention of the animal. With this rifle and bullet you can shoot off a bear's leg or you can let actual daylight clear through him sideways. A hit in a ham means a ruined ham, but almost

always a dead animal within a few yards. A shoulder hit is even surer. It will even kill a deer within three or four minutes by a hit through lungs.

The 35 Rimless, with its slightly greater cross-section and its relatively heavy striking force, seems to do far better killing than a 30-30. It compares more evenly with a 45-70-330. Two shots a couple of seasons ago finished a bear as neatly as I have ever seen the job done, and as it happened neither of the hits touched backbone, heart or head. One bullet went through and out, the other did not.

That 30-06 with heavy bullet at high speed has been pronounced the best moose load ever brought into New Brunswick by a man who knows a good deal about such matters. With it a shot in chest of moose and deer will usually drop them at once or close by, even if no bones are struck and heart is not touched. It has been said that this load has a reliable penetration of 12 to 14 inches in moose and bear. My own impression is that it often has much more, and that unless very big and hard bones are struck, there will be more trouble from the ordinary bullet going through without breaking up enough, than breaking up too much and too soon with failure to penetrate enough.

Last fall a man took 30-06 ammunition to the woods, loaded with Newton 175 grain bullets in front of enough of the right kind of powder to start them at a 2550-foot gait. He shot a buck deer through the neck. The bullet came out in fine style, making a quick kill. He shot a bear twice, once high up behind the shoulders and again in a ham, too far out. The bear did *not* stop. It was afterwards killed by another hunter miles away. All the evidence points to those

Continued on page 12



Champion Shooters

In Great Events of the Year

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OLYMPIC GAMES WORLD CHAMPIONSHIPS, 1920: Seven events won with Remington Palma-Olympic 180-grain .30 caliber cartridges, Remington .22 caliber Long Rifle Lesmok Cartridges and Remington .38 S. & W. Special cartridges.

GRAND AMERICAN HANDICAP won with Remington Nitro Club "Speed Shells."

NATIONAL RIFLE MATCHES: Four world's records broken and three other matches won with Remington Palma-Olympic Cartridges.

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Palma-Olympic 180-grain Ammunition
 .22 caliber Long Rifle Lesmok Cartridges
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Patented Steel-Locked Shell

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CONTEMPORARY SOURCES

(Continued from page 10)

bullets failing to mushroom sufficiently to tear much, and whistling through the bear meat like a full cased bullet would.

And yet this bullet and load really belong in the ultra-high velocity class which is under suspicion of failing to penetrate enough in moose and other heavy game. A prominent hunter killed a deer last fall with a shotquartering to the front, through the heart. The bullet lodged in pieces against the skin on the farther side, thereby bearing out its ultra-high velocity relation to 250-3000, 256 and 22 High Power.

Where long range shooting is to be mixed with short, this 30-1906 cartridge loaded with a bullet weighing 175 or 180 grains to travel at 2600 feet or better perhaps is the most killing combination manufactured this side of the water. Ross 280 cartridge with copper tube bullet may be considered fully its equal, except perhaps in accuracy, but few can own this rifle since its manufacture was stopped during the war.

Ross 303 and other rifles for the cartridge and for the 30-40 cartridge, are better than 30-30 rifles, yet they are not enough better. With the proper modern pyro powder, a bullet of 175 grains weight can be speeded up to 2400 to 2500 feet in the 30-40. Even so, it is not the equal of the 30-1906 which is known to be no more than good enough. An owner of a 30-40 would hardly be justified in trading it off at a big loss in order to change for a 30-1906 rifle, but anyone buying a new gun should not hesitate to choose the latter.

Back a few years a certain hunter was using a Springfield bolt rifle for the 30-06 cartridge. At that time the 220-grain 30-40 bullet was

the best to be had for it—the equivalent of the 303-215-grain bullet. It developed a velocity of about 2200 feet. One season end he came home and straightway bought a 45-70, declaring he was tired wounding game and not getting it. He has since used both these two with success, but he says now that the 45-70 is by far the more reliable killer within 150 or 200 yards. (Better than 30-220 grain blunt point bullet.) That is why he recently has acquired a 405 Winchester. Although it kicks hard and it does not do a great lot beyond 200 yards, it is an improved 45-70, and he says he will depend on nothing smaller for the balance of his hunting.

Colonel Townsend Whelen, previously mentioned, states in his book, "The American Rifle," that for sure killing of heavy game, such as bear and moose, a bullet of at least 40 calibre, weighing no less than 400 grains and travelling at fairly high speed is desirable. His point is that we need a long, heavy slug which will plow through and out of almost any game straight with the line of aim, while mushrooming enough to leave a large hole. It would kick harder than the 405 Winchester, but should be more accurate and would have almost the ranging ability of the 30-1906 heavy bullet recommended.

Of course there is no such cartridge made at present. The description of Colonel Whelen's idea is included here to show the tendency toward a rifle of larger calibre, handling a long, heavy bullet. There is nothing magic or mysterious about this thing of killing power of a rifle. You must make a hole into your game, deep enough to reach a fatal spot, or on through is possible, and big enough to develop nerve shock and to cause free bleeding. No small bullet will do it reliably. No magic quality can be built into a miniature bullet that will give it the

power to accomplish this result every time. A little bullet that is soft goes to pieces; if it is hard it slices through like a chisel, without shocking or causing much blood to flow. The 35 Winchester, 405 Winchester and 45-70 High Velocity have killing power because of their *deep* plowing ability and the great shock they deliver.

A recent test of various mushroom bullets in pine wood brought out that they penetrate some distance before beginning to expand. A 38-40 soft point bullet went through 8 or 10 inches of pine, a 45-70-432 soft point bullet about 15 inches, a 30-1906-150 grain umbrella point about 12 inches, a 30-1906-220 soft point about 14 inches, a 30 Newton about 10 inches and a 280 Ross hollow point, steel jacketed bullet about 16 inches. All of them except the 38-40 and 45-70 were ground to fragments before they stopped. All of the lot penetrated 4 or 5 inches before expanding. The Ross, 150-grain 30 calibre and the Newton bullets cut a clean furrow, no bigger than the bullet, like the corner of a chisel would cut more than 4 inches through the wood, then tore a ragged cavity an inch and a half or two inches in diameter from there onward.

If these bullets slip through 4 or 5 inches of wood before expanding, they will slip through double or three times as much meat without doing so, sometimes at least. That, to my mind, explains why it is possible to shoot a bear with one of them without apparently hurting him much. It shows why a hunter must be on his guard constantly against using bullets that may fail to expand. With American bullets we and other hunters have had more trouble in that direction than from those that go to pieces too soon and fail to penetrate.

Yet many prominent hunters are inclined
(Continued on page 19)


SHOOTING NEWS
AND COMMENT


MANY riflemen regret the passing of Walter Winans. News that the champion shot, while driving in a trotting race near Ilford, England, was seen to drop his lines and fall lifeless from his sulky, was received in the United States several weeks ago. Most of the readers of *Arms and the Man*, even of the newer generation, have learned to know the late Mr. Winans by repute, if not personally, and his frequent communications to the sporting journals of this country and Europe have always been intensely interesting.

Of late years, Mr. Winans was known on this side of the water only through his communications to the press and through his winnings in Europe, but he has always been a friend of the American shooter.

Walter Winans was born in St. Petersburg, in 1852, which would make his age at the time of his death 78 years. In spite of this handicap, it may be mentioned in passing, that he fired some remarkable groups in winning the Running Deer again at Bisley, a few days before his death.

Mr. Winans was the son of the late William L. Winans of Baltimore, and began shooting live game when little more than a boy. From 1870 to 1885 he spent practically all of his time upon the immense game preserves of Scotland, making record kills—experience which later stood him in good stead when he took up big game hunting, and when he undertook to do market shooting on English preserves during the war to supply venison.

From the middle eighties, to the day of his death, he was known as a target shot of superior ability—perhaps the best all-round shot that ever competed in the European matches. Added to his accomplishments in marksmanship, Mr. Winans was a sculptor of no mean attainments and a breeder of blooded horses of international reputation.

From the British sporting papers, two clip-

pings concerning the passing of this splendid shot, are reprinted herewith.

The Shooting Times and British Sportsman, says in part:

"*The Shooting Times* had just gone to press last week when we received the sad news of the death of Mr. Walter Winans. The event was described by many journals as 'tragic,' but to this view we can accord only partial agreement. Tragic in its suddenness it certainly was, but it should not be forgotten that he met such an end as a great sportsman would himself have desired. As Dr. Ambrose, the Coroner, under whom the necessary inquest was held, very justly observed, 'he died in his boots like a man.'

Mr. Winans was undeniably one of the world's finest marksmen. At the Olympic Games in 1908 he secured the gold medal for the double shot in the running deer competition, and he had won the championship gold jewel at Bisley for revolver shooting no fewer than five times. He won the Championship of Spa (Belgium) Clay Shooting Competition for revolver, rifle, and gun, and he was duelling pistol champion at Paris in 1911, and held many world's records for revolver shooting. In his earlier days he was an exceptionally keen big game hunter, and is reported to have shot 2,225 head of big game. In Scotland he created a record by shooting twelve stags at one stalk, 77 fallow deer in one day, and 105 stags in one season. He was a conspicuous figure at the meetings of the National Rifle Association at Bisley, where at the meeting last month he made a 'highest possible' on the running deer range in the double shot competition.

"Devoted to the practical side of horsebreeding and of shooting as he was, and in both of which he achieved such remarkable success, it is surprising that Mr. Winans should also have proved himself a painter and

a sculptor of marked talent. As long ago as 1894 his bronze group, 'The Sioux Chief, Sitting Bull,' was exhibited at the Royal Academy, to which thereafter he was a frequent contributor, one of his works being a portrait model of his trotter, 'Bonnie View.' And only at this year's summer exhibition recently closed his equestrian statue of the King of the Belgians was erected in the Courtyard at Burlington House. He was gold medallist for sculpture at the Olympic Games in 1912.

"Mr. Winans, in addition, was the author of numerous books on shooting, many of which it has been our privilege to review in these pages.

"It is rare indeed to find one who combined such versatility with such conspicuous success as Mr. Walter Winans. For ourselves, we must repeat that we are sensible of a great loss. 'Veros amicos reparare difficile est.'"

Arms and Explosives printed the following:

The late Mr. Walter Winans.—The world will be the sadder for the death of Mr. Walter Winans. A millionaire, and having no great complexity of character, he desired to be somebody who counted. In the days of his revolver career at Bisley he astonished everybody with the number of times he would try and try again, cheerfully buying sheaves of tickets in the process, endeavoring the while to set up a score which would gain first place. It was nothing to him to spend a five-pound note in half-crown entry tickets, making the leading score by way of result, and on top of this effort to spend perhaps four times as much trying to improve on his 41. He was certainly one of the best, if not the best, revolver shot of his day. But there have been others as good, if not better, both before and since. In his *magnum opus* he recites in full the remarkable devices he adopted to secure every possible advantage that was allowable under the rules. Having retired from active participation in revolver shooting, he never allowed the world to forget his prowess. If he had spent all his money on publicity services he could never have obtained a finer press agent than himself. He goes down to posterity as one of the finest shots that ever lived, and we must not forget that at the recent Bisley meeting he won the three events at the running deer. In horsemanship and sculpture he exhibited the same traits, distinctly original in every thought and idea, always drawing inspiration from nature and hammering away at his chosen problem until he really got somewhere. Early in the present year our pleasure was to spend an afternoon with him in the plain and modest apartment in the Carlton Hotel which have been his home for quite a long while past. Entertaining, amusingly egotistical, and withal kind-hearted and even lovable, he exhibited himself at his best the whole time; in fact he was all best so long as you conceded his one obsession. Shooting has certainly benefited from the amazing enthusiasm he always displayed towards it. In many respects he was a genius, certainly in the department of taking pains. We are very sorry he is gone, amongst other things because his brief and pithy communications to the press will no longer bear evidence to his vitality.

What are perhaps the last communications which Walter Winans ever wrote to the sporting press were received by *Arms and the Man* a few days before the news of his death. They follow:

"To the editor of *Arms and the Man*:
 "I made three consecutive shoots Friday morning 9th July at Bisley Rifle Meeting, England, in practice for shooting in the U. S. Rifle Team Olympic Games at Antwerp, and incidentally, I won all three of these competitions at Bisley. They are, all three, re-entry competitions which closed last night, but, as I said, I made them all on three consecutive



Score: 5 5 5 5 5 5—30.



Score: 5 5 5 5 5 5 5 3—38.



Score: 5 5 5 5 5 5—30.



Score 5 5 5 5 5 5—30.

These are Walter Winan's last targets. They won the Bisley Running Deer Events.

THE KERR ADJUSTABLE GUN SLING

Used by the U. S. Army,
Navy and Marine Corps.
Webbing or leather for all
rifles an aid to accuracy.
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Webbing, per doz. \$18.00
Leather, per doz. 30.00

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tickets. The first is for rifles fitted with telescopes.

I used a .265 Mauser (with which I have shot hundreds of deer and Chamois, and which is worn in the grooves), Zeiss Scope on top, score, 5, 4, 5, 5, 4, 5, total 28 out of a possible 30. I took off the scope and scored an identical score, shot for shot, in the "Single Shots", i.e., 5, 4, 5, 5, 4, 5, total 28, but this competition called for four tie shots to be fired if a score of 24 is passed, so I fired four more shots scoring 5, 5, 5, 4, total 19 out of 20. I then took my double .22 H. P. by Rigby, shooting the usual Savage Arms ammunition, and scored, *two shots each run* of the deer, 5, 5, 4, 5, 5, 4, 4, 5, total 37 out of a possible 40. This equals my best on record score made by myself in 1913 and Major Rankens' similar score the same year.

The competition called for four tie shots if the score was "30 points or higher" (this 37 shows high much above what was expected was made, as 30 was considered sufficient to get a high prize). There is a Challenge Cup for the four highest scores made during the meeting in this double shot competition; I am a long way in front in this with 34, 35, 36, 37, a total of 142 out of a possible 160. At Antwerp the range is not so good as at Bisley and I do not expect the scoring will be so good. At Bisley, we had a drizzling rain when I shot, with a varying gusty wind, from the left front."

WALTER WINANS.

"To the Editor of *Arms and the Man*:

"Dear Sir:

"I enclose you three remaining scores I made at the Running Deer at Bisley, England, Rifle Meeting which closed today.

"The one of 38 for double shots is the world's record for double shots.

"The other two highest possible, one won the telescopic for second week the other though equalling Major Rankin was counted out because I had a defective cartridge for tie shots.

"Rankin, for the ties, scored 5, 3, 4, 5. I scored 5, 4 (which gave me the lead), and then I had a weak shot which only went half way down the range and then a 4.

"I only, therefore, needed a four for this week shot to have won.

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IN WET WEATHER**

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"Well anyhow I won five out of the six, equalled in the sixth, and won the Championship Challenge Cup for the four best scores at double shooting competitions with 35, 36, 37 and 38, totaling 146 out of a possible 160."

"Yours very truly,

WALTER WINANS"

THE Annual Field Training Camp of the new Ohio National Guard, the nucleus of the 37th Division, was held at Camp Perry on Lake Erie, from September 1 to 17. With the exception of two rainy days the weather was quite favorable and the general opinion of all the officers present is that it was the most successful Camp in many respects that was ever held by the Ohio Militia. This was one of the largest National Guard Camps held in the United States this year.

The total attendance, including instructors and all special details, was almost exactly three thousand officers and men. The entire National Guard thus far recognized and mustered in was ordered to Camp. No State Guard units were ordered to Camp as these units are not being equipped until Federal recognition is obtained.

Adjutant General Roy E. Layton established at the Camp with his staff and part of his office force and assisted materially in the executive work of the Camp while at the same time continuing the organization of the Guard throughout the State.

Brigadier General Benson W. Hough, Commander of the Second Brigade of Infantry, formerly Colonel of the 166th Infantry (old 4th Ohio) of the Rainbow Division, was placed in command of the camp. The units in camp consisted of the Second Brigade of Infantry, composed of the 3rd and 4th Regiments complete; a Provisional Regiment composed of seven companies and five troops of Cavalry, one Field Battery and one Tank Company. Col. George Florence, of Circleville, was in command of the Fourth Ohio Infantry; Col. H. M. Bush, of Columbus, of the Cavalry and Artillery, and Major Simon Ross, of Cincinnati, of the Provisional Regiment.

In addition to the usual discipline and morale which was maintained at a high standard at all times, two facts were noticeable in this Encampment—the large amount of training work that was accomplished during the period of encampment, not only completely covering, but exceeding the program as laid out by the Regular Army inspectors, and the special, at times intense, interest taken by all the enlisted men in the different drills and work of instruction. The former accomplishment is due to the fact that practically all the officers are men of experience and training, nearly all of whom have seen service overseas, and the latter situation is due to the fact that seventy-five per cent of the enlisted men are new recruits, too young to get into the war, and eager and anxious to learn from men who have been in the game.

The following units are now being rapidly organized:

The first Regiment Engineers, seven companies, all at Cleveland; The First Regiment Field Artillery and seven troops of Cavalry in various larger cities of the State; Signal Corps Battalion, two companies at Cleveland and one company at Columbus; ten companies of Infantry in various localities to be attached to the First and Second Regiments; one Hospital Company and one Ambulance Company. Most of these units will be ready for inspection and Federal recognition before the end of the present year.

WHAT is the test which should be applied in determining a marksman's right to the title of "All Around Champion?"

For the past two years, the National Rifle Association has staged a competition with service rifle, pistol, small-bore rifle and shotgun, the winning of which carries with it the title of "All Around Champion." Comes now Captain A. H. Hardy of Denver, with some comments on the "All Around" game as he saw it at Perry. Captain Hardy says:

Two weeks previous to the National Rifle Matches at Camp Perry, Ohio, I received instructions to report at that point August 1 to take charge of an exhibit and to give exhibitions of fancy shooting for the boys, whenever a good opportunity presented itself.

Shortly after my arrival, by making a little tour of the range, I found practically every modern fire arm made in the United States doing its bit, to promote the great American Game. And right here I want to say that Colonel Mumma is due the highest praise and congratulations for pulling off such a show so successfully.

My first visit to Camp Perry was in 1913. Members of the Denver Revolver and Rifle Team, McCutchen, Poindexter and "Happy" Smith had to have another shooter to make a team of five, so took me along for a "filler." Denver won and with a world's team record and I did my best to help them, but the Military Game—that "ready on the right" stuff—the flags down and the sudden appearance of the targets were all new to me and with no previous experience I could not concentrate, but had my mind entirely on trying to keep my revolver in the right position for fear of being ruled off the range.

This year, however, I saw an opportunity to get hardened, as it were, and believe me, it's a good way to "get", for down on the Pistol Range Major Rumsey was working overtime from eight in the morning until five thirty p. m. The shooters at each range stood in line awaiting their respective turns and aside from the clatter of the Colt .45 Automatic, an array of aeroplanes in the rear exercising their mighty lungs, together with a trio of machine guns near the Club House, there was very little noise to distract one. At the start it made one shake like he had the ague, but a few days of it put you in shape to withstand anything and right there I learned to shoot shoulder to shoulder with the rest of the "tried and true's" and I would not take a barrel of money for the experience.

Down in the old apple orchard, the crack of the .22 calibre sounded like a primer along side of the Springfield, but it had its devotees, the range being under the personal management of Captain E. C. Crossman, one of the country's best shots.

At the extreme Eastern side, two automatic traps threw the elusive clay targets at unknown angles and practically every shooter who visited Camp Perry had an opportunity to crack a few. This was in charge of Haze Apgar under "Buck" Galvin's direction and the many professionals present assisted materially in teaching the boys the Scatter Gun Game.

An all around match was staged, consisting of ten shots with a .22 calibre rifle, any iron sights, distance one hundred yards, possible



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PUT liberally into the barrel immediately after shooting, it will preserve it indefinitely. Previous cleaning is not necessary nor harmful provided dopes used are entirely removed before the Safetipaste is applied.

B.S.A. Firearms Safetipaste bears the B.S.A. Trade Mark, an unqualified guarantee backed by 60 years reputation that the products which carry it are all that is claimed for them.

One tube will keep a dozen guns in condition for a year.

Saves Cleaning and Anxiety

A Great Boon to Riflemen and Hunters

THE PRODUCTION EQUIPMENT COMPANY

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one hundred; twenty shots at one thousand yards, any rifle not weighing more than twelve pounds and any sight; twenty shots at two hundred yards, offhand, any iron sights. One hundred and fifty of the three hundred points of the N. R. A. Pistol Match to count together with one hundred clay targets, with shotgun for one hundred points.

Hats off to Mr. G. S. Hall of California. He is the winner of this match and gave an excellent account of himself at every range:

- 1,000 yards he made 92 x 100.
- 100 yards prone, .22 calibre, 96.
- 200 yards off-hand, 89.
- Pistol, 130.
- 95 out of 100 on clay targets.
- A total of 502 or a 91 per cent average.

While this is termed an all around contest, it really determines nothing, as an all around contest should have each fire arm represented by an equal number of points. The inconsistency of the present arrangements has been pointed out to the Committee in charge of the arranging of these matches and it is hoped that the rifle, pistol and shotgun, will, in the future, be represented by an equal number of points.

The entire N. R. A. Pistol Course of 300 points should count and likewise the Rifle Course. Then either count, each, target 3 points for shot gun or shoot at 300 "birds."

Both the Pistol and National Rifle Course gives the real honest-to-God, all around shooter, a chance to display his ability and the rapid fire portion of each match neutralizes

the contest, giving the rapid fire bug a chance with the slow fire artist.

Throw it open to any Military Arms and cut out the Re-entry, include ten shots at 100 yards, .22 calibre.

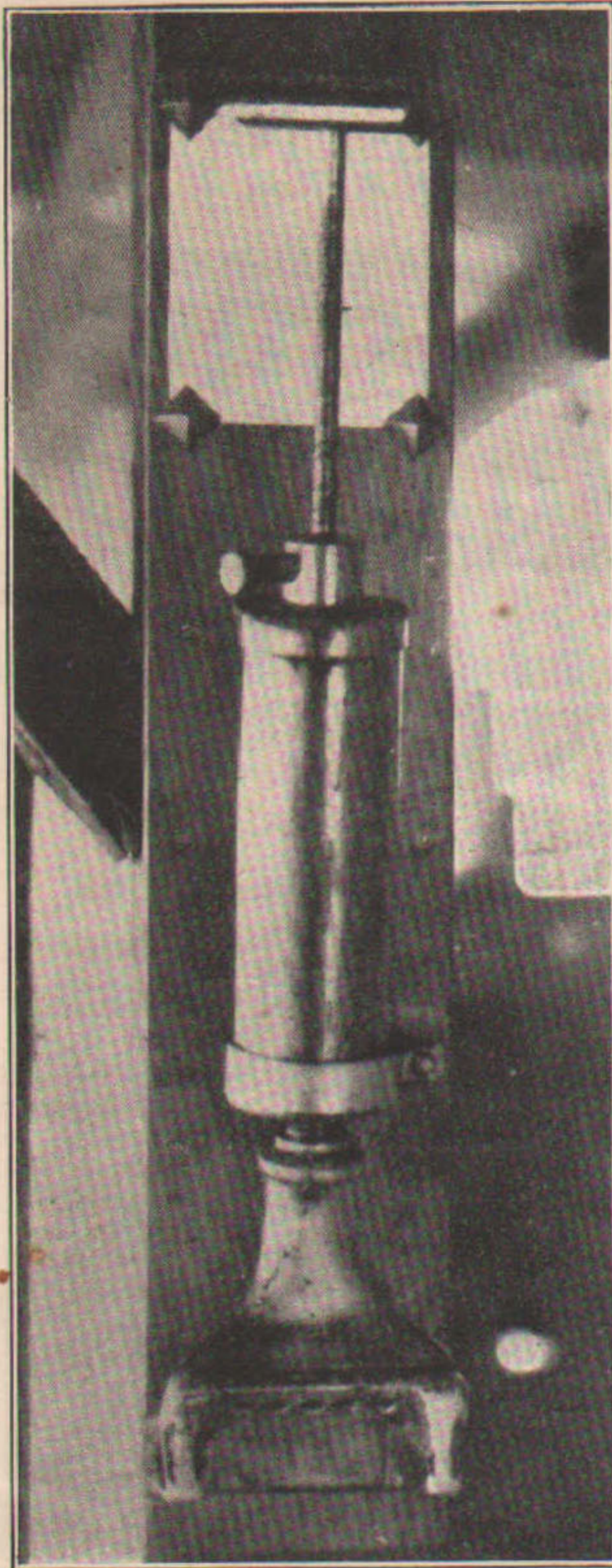
I should like to hear from others, as to just what they think of conditions for an all around championship contest. It should be made one of the most popular contests of the Big Meet.

SOME dope on gunstocks and the modern way of making them—back in the days before machinery, stocks for shotguns and rifles were made by hand. The skillful workman took a block of wood which to his practiced eye appeared to him to be suitable.

By hand he sawed or hacked the wood into an approximately proper shape, and then put in many hours of patient labor in draw-shaving the stock down to its final form. In those days hand labor was cheap and since everything was made by hand anyway it did not make much difference to the gun maker what stock dimensions the customer wanted. In fact he expected to have the customer furnish the dimensions of the stock he wanted. And incidentally guns of those days were far more expensive in proportion to other items that go to make up the cost of living than they are today.

Modern gun making has improved the method of making shotgun and rifle stocks. It is still necessary for an expert to go over the lumber which has been standing in the factory seasoning for a long period of time, and mark out roughly the outline of the stock

on the boards. After this man is through the blocks of wood go to the bandsaw operator, who feeds them to the saw so that the penciled outline is followed. Then they go to the forming machines. At the back of this machine is a steel model just a shade larger than the stock is to be, and pressing against this model stock is a roller, connected by arms with a very rapidly revolving wheel having little knives around its edge. The stock revolves slowly in time with the model, and the revolving knife wheel cuts away the wood so that when it has finished its travel from one end of the stock to the other the wooden block has assumed exactly the same shape as the steel model. From this point the stock is carried through a number of machine operations which cut the shape on the rear end for the butt plate and make the necessary cuts for the trigger guard, and receiver, depending of course on the model to which it is to be attached. Then it is assembled with the receiver and trigger guard, which are in the finished machined state, but are not blued, and after some slight touching up by hand the finishing on the stock is done on sand belts, which are belts traveling over pulleys covered with sand just like sandpaper. They smooth the stock down to fit the receiver and take out the rough marks left by the form-turning tools. You can easily see from following this process that any change in the stock dimensions means that the whole stock has to be made by hand, which explains why a gun calling for special dimensions costs so much more than a standard one.



The Hart Spitzer Greaser.

THE range of the Los Angeles Rifle & Revolver Club is fitted with the very clever invention pictured herewith, which has proven a joy to all members and visitors who have used it. Mr. S. H. Hart, a real "shootin" member of the club and a crack mechanic, evolved the idea and made the little instrument.

The shooter, upon passing through the gate to the firing shed, simply inserts the bullets of a clip of cartridges in the five properly spaced holes and withdraws them nicely greased and ready for business. A half turn of the handle supplies the recess behind the holes with enough graphite mixture for the next half dozen men up. It is all so simple, quick, and efficient.

Mr. Hart has not patented his invention, nor does he care who copies it, so range officers take notice of this opportunity.

The barrel and plunger section are simply a hard grease gun of the type using a threaded plunger for greater power. To the outlet at its lower end is threaded the small part, or neck, of an old vacuum cleaner. The "mouth" of this was closed by brazing in a piece of aluminum and the five bullet holes drilled and spaced properly.

A sign above the Hart Greaser reads:

"One eighth turn of micrometer greases enough bullets for fifty potential bull's-eyes.

Patented in Siam, Borneo, and Sycamore Canyon."

TWO challenges for competitions with small arms have been received, one from the Long Island, New York, Gun and Rifle Club, at Rosedale, and the other from the Minneapolis Marine Rifle Club.

The Minneapolis Club desires to challenge any club to a contest over any range up to 1,000 yards. Organizations interested in arranging such an event are requested to communicate with E. M. Birdsall, Secretary, 3959 40th avenue, South, Minneapolis.

From C. Demmerle, Secretary of the Long Island Club, comes this communication:

"The Long Island Gun and Rifle Club offers to match A. Hubalek, Jr., age 17 years to shoot a match of 50 or 100 shots at 50 or 100 yards for \$100.00 to \$500.00, under the following conditions.

Any boy between 17 and 20 years.

Distance: 50 or 100 yards.

Position: offhand.

Any .22 cal. rim-fire rifle.

Any sights or trigger pull.

Match can be shot at Rosedale, L. I.

Address C. Demmerle, Secretary, Rosedale, Long Island."

With this challenge Mr. Demmerle encloses a report of the Long Island Championship. He says:

"The Seventh Annual Match for the Championship of Long Island was again won by the old war horse, Harry Pope. Distance 100 yards. 50 shots offhand. Possible, 500.

"Scores: H. Pope, 467; A. Hubalek, 462; J. Kaufman, 456; A. Hubalek, Jr. 446; E. Lahm, 433; H. Schweitzer, 428; G. Worn, 426; J. Ward, 418; Major Healy, 414; C. Simmens, 412."

"WHY not encourage all kinds of rifle shooting?" asks Thomas Martin. In discussing the merits of different shooting systems, he says:

"A writer who signs himself 'Ichabod' in *Arms and the Man*, issue of April 15, makes reference to the 'Schuetzen Game', in a manner that is hardly fair to those who like that form of rifle shooting, either as plain recreation, or as a means whereby progress and improvement may be made.

"I do not want 'Ichabod' to think that it has been my own particular style of shooting, but I do think any rifleman who likes the game of rifle shooting—whether with Schuetzen stocks, palm-rests, set-triggers, or any of the other things which go to make up what is termed the 'Schuetzen Game,' or with any of the later and modern styles of arms, ammunition, or positions—should be encouraged, for therein lies greater progress. Set-triggers are a great advantage to many and there are those who, if their choice or pleasure is interfered with, would simply step out of the game of rifle shooting.

"To the majority of riflemen, rifle shooting appeals as a pleasure, or means of recreation, it is not so costly as others, relaxes the mind and if the shooter is of an inventive turn of mind, he may improve details for all others.

"Are we—because we do not all use the more modern methods—to deny the great benefit that such earnest riflemen as Pope, Schoyen, Hayes, Schalk, Rice, Warner, Zischang, Lowe, Hudson, Neidner, Lefevre, the Zettlers, Farrow, Wurfflein, Leopold, Kephart, Monroe, et al., who all shot the Schuetzen style, and their later, but just as earnest brothers whose names are famous: Gildersleve, Yale, Washburn, Bodine, Hinman, Fitch, Walker, Rabbeth, Chase, Wilder, Harwood, Judd, Hadley, or Dr. Mann? Are we, I repeat, to forget the benefit all these men have done for us, are we to forget this and for the sake of 'pep,' 'ginger,' 'jazz' and all the rest of the modern foolishness, act as bolsheviks? Shall we forget those who at great personal expense have helped the rifle game to the present point of progress and deny to others the right to (perhaps) benefit the game still more?"

"'Ichabod' must not forget, that it is more due to civilian riflemen, than to any other class, that the present so-called perfection, is due; the Government may in some cases have paid the expense, but practically all of the big improvements are from the experiments of civilians. There are thousands of riflemen who can never, perhaps, use a service rifle, or own one and who having good servicable, black-powder rifles, desire to use them; are they all to be compelled to buy newer arms and powders, or allowed to get good service and recreation from the old ones?"

"I think Capt. Lincoln Riley has about the right idea regarding rifle shooting, when he states in the same issue: 'Why not promote rifle shooting for what it is—a clean, manly sport? Induce young people to start shooting, teach setting sights, doping weather conditions and do it all as cheaply as possible, consistent with good work. Real 'Nail-driving' accuracy is exactly the thing to be aimed at, if he goes hunting, he will probably make good and if fate sends him to the military camp, he will be mighty good material for the instructors to work on, but let them do it there; field firing problems have no place in the civilian club.'

"No, friend 'Ichabod,' let every one play the game as he sees fit, provided always that he does not interfere with the rights of others, nor try to compel us to follow his ideas. I fail to see why the Schuetzen style of shooting has hurt anyone, or is ever likely to, and there are many other things just now that had better be interfered with, than the Schuetzen game; encourage it.

"If 'Ichabod' must interfere with others, let him try the manufacture of many modern rifles and make it a misdemeanor to place one on the market, unless it is fitted with a rear peep-sight on the tang, or so made that such a sight can be applied easily by any one. As it is, many men cannot use the rear sight away up on the barrel, because their eyes are optically defective. Get this done friend 'Ichabod' and you will benefit me, as well as hundreds of others.

THE making of shot is an interesting story. Nowhere is it told better than in the big square concrete tower-like building which rises above the city of New Haven. Visitors who have been fortunate enough to go to the top of this shot-tower marvel at the unique processes which assure the unvarying accuracy of the tiny pellets. Few laymen realize that here some fifty tons of shot are made daily by standards which are maintained with the greatest care and precision.

During the past year thousands of persons have ascended to the top of the shot tower and watched the intricate machinery by which shot is made, without being touched by hands after the bars of lead are put into the great melting cauldron on the very topmost floor.

This cauldron, at the top of the tower, as high as a good sized skyscraper, is kept at a heat which melts a solid bar of lead in a minute or two.

From the cauldron flows a continuous stream of molten metal into a metal sieve. Passing through the sieve, with holes of varying diameter to make different size shot, the drops of lead fall into tanks of water at the very bottom of the tower. By the time each drop of metal reaches the tank it has become a solid sphere of remarkable roundness.

From the tanks of water the shot passes through a drying machine, then to conveyors which take it up several stories in the shot tower. Here a big revolving screen separates the rough bits of lead from the shot.

Then comes one of the most interesting and unique processes in shot manufacture. It is the series of thirteen "assorting tables" which automatically select the perfect shot and discard any having the slightest imperfections. The shot flows from a hopper onto very slightly inclined glass 'tables' and the perfect

shot gather sufficient momentum to roll down the table and jump a gap at the base. Any imperfection, such as rough edges, slows up the rolling shot so that it drops off into the gaps that lead back again to the melting pot.

Every shot passes over a series of these "assorting tables," one above the other and only the shot of perfect form can survive these elimination tests.

Visitors, when they see this most exacting of tests, will understand why shot has such accuracy and uniformity. It is because of the extraordinary precision of this assorting machinery, which makes it next to impossible for any but the absolutely perfect shot to get by.

From the assorting tables the perfect shot go into big revolving drums with screens in which the shot is sorted into the various sizes. From there the shot passes into polishing machines, which form the final operation.

The shot is then stored in great storage tanks, from which it is drawn and weighed automatically and sewed into bags or sent out for shell loading.

A. O. NEIDNER, the expert rifle maker, has moved from his old location at Malden, Mass., to Dowagiac, Mich., where he has formed the Neidner Rifle Barrel Company. He has obtained an excellent site for his new factory where he can obtain a 200-yard testing range. The factory is nearly ready for the installation of the machinery. A complete line of barrel boring and rifling machinery, and stocking machinery has been purchased. It is Mr. Neidner's intention not to make rifle actions, but rather to fit fine, superaccurate barrels and proper fitting stocks to existing actions such as the Springfield, Mauser, and Winchester. Barrels will all be tested and none will be accepted which do not make 4 inch groups or better at 200-yards. Mr. Neidner's many friends will be glad to know that he expects to be able to take orders within a few weeks.

DUELLING is strictly against the law in France, but old customs die hard and there are still many affairs of honor settled on the sly by recourse to pistols and swords.

Consequently the French gentleman's education is hardly complete without a knowledge of swordsmanship and pistol shooting.

On a very fine residential street in Paris just off the Champs Elysees, is the shooting academy of Gaston Renette, a place where the gentlemen of France may be properly educated in the use of the duelling pistol.

Outwardly Gaston Renette's establishment does not differ from the private residences on either side of it, with the exception that his name is above the door in neat gold letters.

Upon entering the hallway one finds well arranged salesrooms where duelling pistols and sporting firearms and equipment of various kinds may be purchased. A door at the rear of the hall leads into the shooting gallery proper, where there are ranges for duelling practice on a man-shaped target, and also the regular ring targets. Each firing point is partitioned off and on the duelling range there is an electrical indicator, which shows the value and location of each shot fired. Should you desire to try your skill at duelling, one of the attendants will bring out two muzzle loading duelling pistols and a supply of powder, bullets and caps. He will place you at the firing point, present you with a loaded pistol and instruct you to keep it pointed at the ground until he says fire. In a rather shaky voice you say ready, whereupon the instructor says fire—one—two—three! There being about two and one-half seconds interval between the command "fire" and "three!" during which time you are expected to swing the pistol up into line with the target, sight it where you think the bull's-eye ought

to be (bull's-eye does not show) then pull the trigger.

If you have done but little pistol shooting, you will either fail to fire within the time, and thus disqualify your string, or else shoot so quickly that you will not come anywhere near the target.

While each shot is being fired the instructor loads the other pistol and he is so skillful at it, that there is practically no delay.

Around the walls back of the firing point there are cabinets containing privately owned pistols and revolvers, belonging to the regular patrons of the gallery, and reproductions of the scores made by famous pistol shots.

Gaston Renette's gallery is well worth a visit if you every happen to be in Paris.

FROM *The Jewelers' Circular* comes an interesting story and illustration depicting a target range in the early 16th century. The clipping reads:

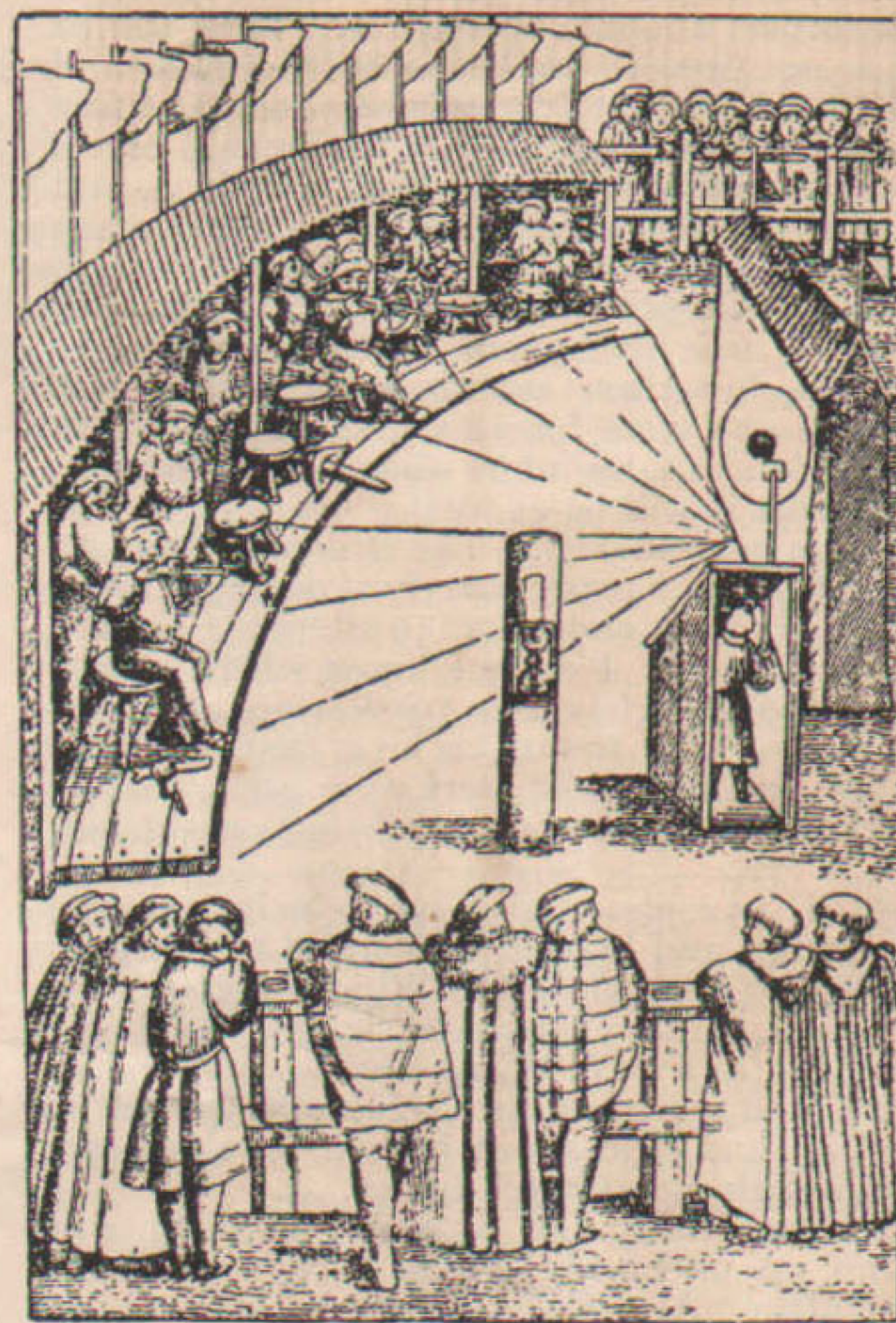
In the age in which we live, the timekeeper dominates, as master, in all sports, and in competitions, and the estimation of the time employed for the execution of a feat, or the establishment of a record is essential.

It is by fifths and tenths of a second that in our age we expect to determine this time, but it is necessary to state that it is only since the necessary precision has been obtained that timekeepers have been made use of.

The question of time in sports is, however, as old as the competitions themselves and has been in evidence at a time when clocks were hardly or but little known.

Proof of this is furnished by the illustration herewith, taken from a pamphlet preserved as one of the most valuable antiquities in the library of the city of Zurich. This illustration represents a marksmanship contest that took place at Zurich on August 12, 1504.

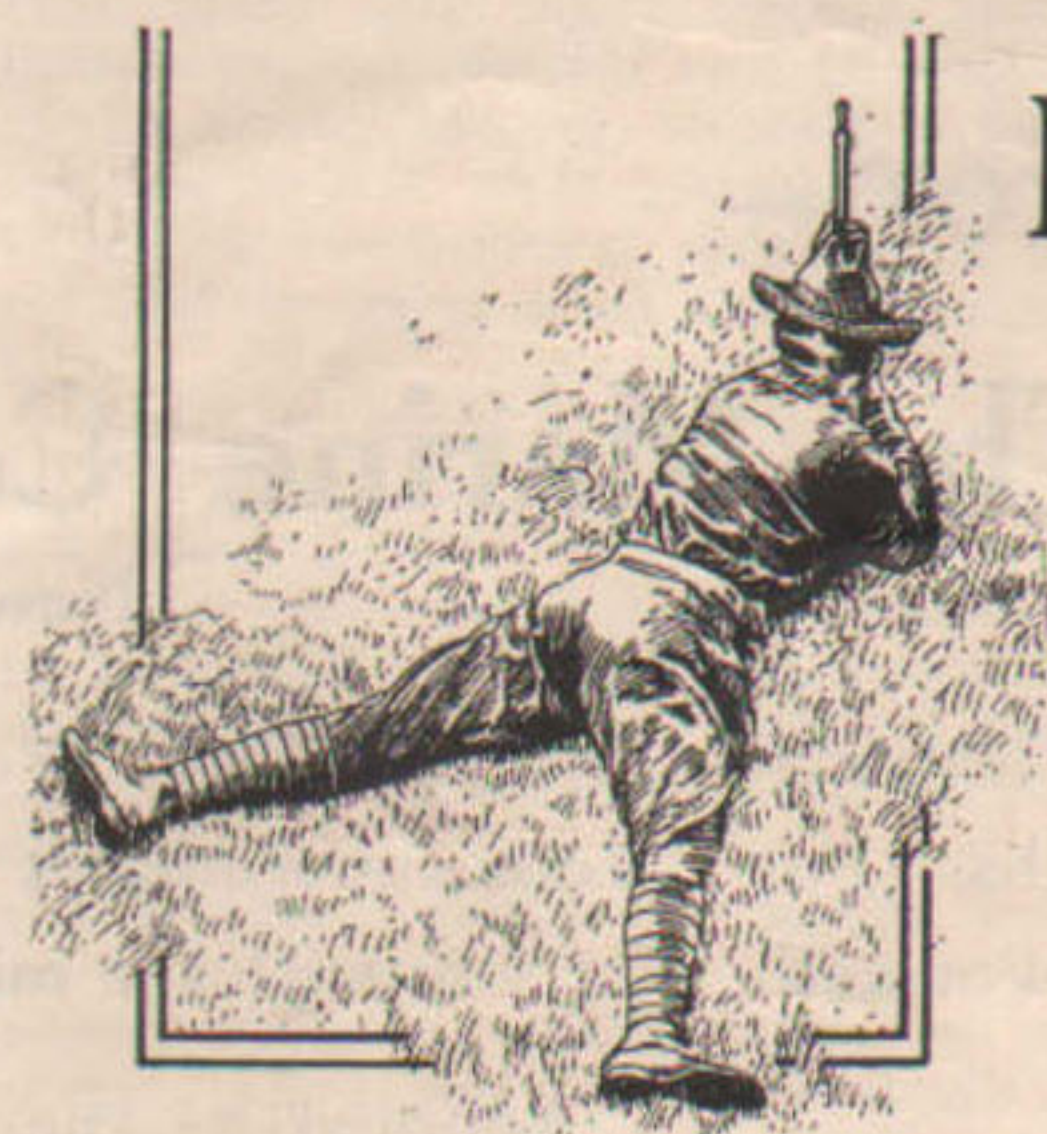
In the foreground are shown persons who appear to be of importance, the judges probably; in the center are the marksmen, the target and the marker, in the background the



public.

At the side of the marker, and in front of the jury, may be seen the timekeeper, which is a sand glass. Each marksman has probably to make a certain number of shots between two reversals of the apparatus, or possibly, says *L'Horloger*, the object may be a test of speed, in which case it suffices to count the number of shots fired while the sand in the glass all runs out.

Here we see again that there is nothing new under the sun.



Loads And Re-loads

In this column, conducted by Capt. Townsend Whelen, will be answered inquiries pertaining to target and hunting small arms, hunting licenses, game guides, and kindred subjects. An effort will be made to reply to inquiries direct by mail before the appearance in this column of the answer. The service is free to all, whether the inquirer is a subscriber to Arms and the Man or not. All questions are answered at length by mail. Those portions of general interest are published here.

WILL the use of a supplementary chamber for the .32 S. & W. in a Krag Carbine, cause any injury to the chamber or the barrel?

Can reasonable accuracy at short ranges be expected with this combination?

Will the use of Mobilubricant on the Krag cartridge increase the breech pressure to a dangerous point?

Where can I purchase a new barrel for a Krag carbine? In this connection I have found the price of the different arms companies far too high to warrant purchase.

What is the likelihood of the new Springfield .22 cal. being available for purchase by the members of the N. R. A.?

Have you ever heard of anyone making a barrel of high speed tool steel? This steel you know has great heat resisting qualities.

L. W., Pittsburgh, Pa.

Answer: The use of the .32 S. & W. cartridge and supplementary chamber in the Krag carbine should not cause any injury to the barrel provided the barrel is clean and in good condition. This cartridge should not be fired in the rifle when the rifle contains any of the fouling of the service cartridge. Otherwise you will get poor accuracy and will lead the barrel badly.

Reasonable accuracy at short ranges, say 25 yards, should be obtained from this cartridge in the supplementary chamber.

Mobilubricant on the Krag cartridge when properly used on the bullet only, and with a thin even coating will not increase the breech pressure to a dangerous point.

The only way that I know of to obtain a new barrel for the Krag Carbine is to have it made to order by the Neidner Barrel Corporation, 612 Spruce Street, Dowagiac, Mich.

This is a new company that will be ready to take orders about November 1. They will be in a position to make most excellent and accurate barrels. It might be possible to find some one who could take a Springfield barrel and rechamber it for the Krag cartridge, and thus avoid the expense of a fine hand-made barrel.

The Ordnance Department is doing its best to get a new Springfield .22 calibre into production, but there are no funds available at the present time for this and no funds can be made available until about June 30 next. Therefore it will be at least a year before this rifle can be produced. The Ordnance Department has made many barrels of different kinds of steel in their endeavors to eliminate erosion and corrosion. I do not know whether high speed tool steel has been tried or not. As yet there has been found nothing that is a real improvement on the steel now used, cost of production and everything being considered.

WILL you please give me velocity, muzzle energy and breech pressure of the factory loaded high velocity 32-20 Winchester?

I have an idea that this cartridge would be a fine load in a S. & W. revolver. A friend of mine fired six from his 32-20 S. & W. and is very enthusiastic about it as a revolver cartridge with metal patch bullet.

Do you think the S. & W. revolver will stand up under the use of such a powerful cartridge? Also will the gun be safe to use with them. If not, do you think the S. & W. people would make a gun that would stand the pressure and the metal patched bullets. I understand they are making a revolver that takes the .45 Colt Auto cartridge.

A. H. S., Youngstown, Ohio.

Answer: The data for the 32-20 high velocity cartridge is; muzzle velocity, 1640 feet per second; Muzzle energy, 690 foot pounds; standard pressure, 25,000 to 25,770 pounds per square inch.

Both the Cartridge Company and Smith & Wesson caution that it is not safe to use this cartridge in revolvers. We wish to caution you against doing so. The pistol might stand it but you have no safety margin. I do not believe that the Smith & Wesson Company would consider making a gun to take it.

IN the August 1 number of *Arms and the Man*, I read what you have to say about the 220-grain soft nose bullet, made by the Western Cartridge Company for the .30 cal. Springfield, model 1903 and 1906.

I have obtained a number of these bullets and would like to ask you how to load them for the Springfield rifle. I have a lot of Frankford Arsenal powder which requires 46 grains to obtain a velocity of 2700 feet per second with the 150-grain bullet.

Is it safe to use the full amount for this 220-grain bullet or is it necessary to reduce the charge?

Also would like to know whether to seat the bullet the same distance in the shell as the 150-grain, thus maintaining the same amount of air space and leaving the bullet project further from the end or whether it will have to be seated further in.

I have also a Mauser Sporting Rifle made by the Waffen Fabrick Mauser Co., at Oberndorf, to take the model 1906 Springfield cartridge. You probably know more about this lot of rifles, which was gotten in before the war, by someone, than I do.

I read about them and finally obtained one from their agent here in New York. The breech and barrel compared with the Springfield seems rather light and I wish to know whether it is perfectly safe to use this 220-grain cartridge in the rifle.

F. R. G., New York City.

Answer: I am in receipt of your letter of the 13th inst., relative to the 220-grain bullets made by the Western Cartridge Company for the Springfield rifle. With the powder which

you obtain from the Springfield Arsenal, which is known as Pyro D. G., and also as DuPont, No. 20, the heaviest charge that I would recommend is 44 grains, which will give a velocity of about 2250 feet per second. The bullet should be seated in the shell so that the cartridge will have the same length over all as the Service cartridge. Your Mauser rifle for the same cartridge will be perfectly safe with this load. It is practically as strong as the Springfield rifle.

IT seems to me that some little time ago I saw a review of the new 250-3000 bolt action Savage Rifle, and likewise a reply from yourself to some inquirer who asked about peep sights on the cocking piece or on the receiver, but I cannot find the articles in question so that I am forced to appeal to you and once more impose upon your good nature.

I have just purchased a 250-3000 bolt action Savage Rifle. I do not like the rear sights where they are on the barrel and want to mount some form of Lyman sight, if possible, either on the receiver, or the 103 or a modification of it on the cocking piece. This would give me about 8 inches more sighting radius.

On a 250 lever action Savage I have mounted one of the No. 30 Lyman sights.

Answer: Relative to the rear sight for the Savage Bolt Action Rifle:

The Lyman Gun Sight Corporation have just placed on the market a sight known as their No. 54 for this rifle. It is a very excellent Lyman peep sight, with both elevation and windage adjustment, which goes on the sleeve of the bolt just in the rear of the bridge of the receiver. It is excellent in every way and I would really recommend it in preference to a sight on the bolt head or any other sight on this rifle.

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ARMS AND THE MAN

WASHINGTON, D. C.

CAN you inform me whether or not there are to be changes made in the model '03 Service Rifle? I refer especially to changes in the sighting. I have heard that the Springfield is to be equipped with a peep sight on the receiver bridge, as in the case of the model '17 rifle.

Is a heavier bullet to be adopted by the army, and will it necessitate any change in the chambering of barrel?

E. A. P., Garland, Ark.

Answer: In reply to your letter of August 30, the Ordnance Department is now experimenting with a receiver sight on the bridge of the receiver for the model 1903 Service Rifle. A perfectly satisfactory model has not yet been evolved and it is not yet known positively that a change will be made, but it is thought likely that if we do evolve a satisfactory sight that hereafter the model 1903 rifles may be made with this sight. It will certainly be a year or two before we would be able to produce a rifle with this sight if it is finally decided to do so.

The Government is also constantly experimenting with heavier bullets for the Springfield rifle and also for the machine guns. It may be that the army will go to a heavier bullet in the future but it is hardly likely that there will be any change in the chambering of the barrel. This also has not been decided upon definitely.

I HAVE a 1903 Springfield for the .06 cartridge. When the 220-grain Winchester load is used the point of the bullet shaves off when loaded from the magazine. Can this be remedied?

Is this rifle more accurate with a military or sporting stock?

In cleaning this rifle from the breech the rod rubs against the rifling. Does this have any ill effect on accuracy?

Can Mr. D. R. Talmage furnish any more aluminum butt-plates? If so, what is his address?

How is the hand guard fitted at the receiver of his rifle?

Is there any advantage in using mobilurbitant on the short range load recommended by you in *The American Rifle* for the .30 '06? Will this rifle stand 4,000 soft point, 150-grain bullets and 46-grain, No. 16,6,000 short range loads, using mobilurbitant? In cleaning this rifle I use Winchester Crystal Cleaner. Is this all right?

Can you recommend any gunsmith near Pittsburgh to remodel my rifle?

G. G., Wildwood, Pa.

Answer: I think that the shaving of the bullet as it enters the Springfield rifle is probably due to a little sharp corner somewhere in the action. Find out where this is and round it just slightly with a whetstone.

Repeated experiments have shown that the sporting stocks on Springfields when well made are just as accurate as the military stock.

In regard to cleaning the rifle, if you use the hard steel cleaning rod a little rubbing against the rifling at the breech will do practically no harm.

Mr. Talmage made only two of these aluminum butt-plates, and as he is not in the business I doubt if any more can be obtained. It is merely a suggestion for others to go and do likewise. I think that the hand-guard on his rifle was secured to the barrel by a clip band around the barrel, but am not sure. I do not think there is any advantage in using mobilurbitant on the short range load, but you can use it without any disadvantage if you wish to do so.

I think the 4,000 rounds of 150-grain bullets, and 46 grains of No. 16 powder will cause quite an amount of erosion in the barrel of the Springfield, but the rifle should stand more than this without becoming inaccurate. The short range loads when used as directed cause practically no wear. The Winchester Crystal

Cleaner is very satisfactory for cleaning the Springfield rifle.

I would recommend Edward Semence, 1150 West 10th st., Erie, Pa., as being the best gunsmith I know of near Pittsburgh who can remodel your rifle. He has been very highly recommended.

CONTEMPORARY SOURCES

(Continued from page 12)

to believe that the game bullet of the future must be constructed to expand less easily than the Newton, the umbrella point and even than our ordinary soft point bullets having lots of lead exposed at the tip. A pin-point of lead exposed, and that supported by a jacket of double thickness round the front of the bullet, is their idea of an ideal game bullet.

The problem is to get a bullet that will hold together during much penetration in heavy game, (especially through big bones) while mushrooming sufficiently—and that will yet mushroom in lighter, less tough game, such as deer. Such a bullet has not yet been made. The 500-grain lead bullet of 45 calibre perhaps comes the nearest to it. The 145 grain copper tube bullet of the 280 Ross is another not far behind, as experience shows. Can any one bullet be made to meet both conditions? In the humble opinion of the writer such a bullet can be built, but it will not have merely a pin-point of lead at the front, or double-thick jacket there. On the contrary it will be built to mushroom against the slightest resistance, although the point must be protected from injury in handling, in the gun and in the air.

Experience with hollow point bullets, extending from the present copper tube of the 280 cartridge and of various English cartridges back through forty years and longer to the "express" bullets of buffalo days, indicate that our future bullet should have that type of front end. I have yet to be convinced that plain soft point bullets and Newton bullets expand *quickly enough* after they first strike the game, or expand *sufficiently* on *some occasions*. The point should be sharp, to permit the bullet to retain its velocity better and to keep wind from blowing it sideways.

As *light weight* bullets with hollow points lack penetration, the future bullet must be long and heavy. And to hold the weight together the rear half, or three-fifths, must be hardened by alloying, or provided with a double thick jacket. The combination of long, heavy bullet with a soft, hollow front end, pointed sharp, and a tough rear half should give exactly the results we all have been looking for these many years. Its adaption to 30 calibre cartridges might improve their killing power, although it primarily would be a 35 or 40 calibre bullet. It should be given high velocity in whatever sizes used.

About 1880 and 1890 old bear hunters of the generation on ahead of myself were enthusiastically using the various 45 calibre rifles—45-60, 45-70, 45-75 and 45-90. The old 1876 model Winchester, with dog-leg action like the model 1873, in 45-75 calibre was very popular. Some of the old 45-75's are still in use, and in spite of objections we read about, it is difficult to find actual users of that cartridge who do not speak well of it. They reloaded much of their ammunition. When loading for a particular deer they used pure, soft lead to make bullets, and preferred hollow points. When fixing up bear medicine, they hardened the lead a little with pewter, the only hardening metal readily available to them.

Present day duplicates and improvements on such a cartridge are to be found in our 45-70 High Velocity, which also may be loaded

if desired with 350-grain solid bullet or with the 500-grain lead bullet. Also 35 Winchester and 405 Winchester undoubtedly possess the same deep plowing ability to a superior degree. The 405 in particular is valuable, because a cast lead or alloy bullet of 300 grains can be loaded to give black powder velocities if desired. Such a load should be useful for shooting in which the full power of the cartridge is not needed, and for use when factory ammunition may be unobtainable. The large calibre enables one to load a powerful combination at home.

There is food for thought in several miscellaneous observations that may be made on killing abilities of bullets. For instance, we all know the old-fashioned round, muzzle-loading balls were deadly in game. They frequently stopped game with hits that were not in fatal places. Meat often was black for several inches round their holes. The odd part of it is that they were all light in weight, flew at low velocity (often only 1000 feet, never more than 1400 or 1500 feet) and developed comparatively little energy, measured in foot-pounds. Most muzzle loading balls were about the weight and power of our 32-20. No one who knows will contend that the 32-20 will kill as well as the average muzzle loader. Why? A buckshot weighing 30 or 40 grains is far more deadly than a 22 calibre rifle bullet of same weight. Why?

As a further speculation of interest though not of much value, why is it that a rifle with a very quick twist appears to throw lead in a more deadly manner than one with a slower twist? For instance, the 25-35 carries a bullet of 117 grains and smaller calibre, against the 30-30's bullet of 160 grains and larger calibre. One might conclude from the figures that the 25-35 had only about half the killing power of the 30-30. From experience, however, the 25-35 is known to equal the 30-30 in killing power, if not to exceed it. The 30-30 bullet as it leaves the muzzle is spinning (due to the rifling twist) at the rate of 144,000 revolutions per minute; the 25-35 at the rate of 180,000 revolutions per minute.

Could it be possible that bullets thrown without much spin, or with none, as a smooth-bore throws ball or buckshot, deliver more shock to meat they encounter than those with a faster spin like the 30-30 has? And could it be further possible that if the spin is increased enough it gives a bullet a new kind of shocking power? Remember that the 3000-foot velocity bullets revolve upwards of 250,000 times per minute. Or might a spinning bullet merely cut meat like a saw, while a drifting bullet bursts blood vessels like it does a can full of water? Does a rifle bullet, on striking anything, tend to slow up or pause in its forward travel for an instant, while keeping on with its revolving, thereby becoming a veritable drill or auger? Does a bullet penetrate a foot of pine or a foot of deer in the same time that it penetrates a foot of air?

One more speculation, and we will have enough for a month or so. It is an established fact that individual animals differ in their capacity to stand punishment. Every farmer and butcher knows that some hogs and cattle, shot in the brain or where the brain ought to be, will barely stay down, and a few of them get up and take three or four more bullets. Others go down at the first tap on their skulls. I know of one old she bear that was shot five times square through the body with a 35 Winchester. We thought she would be so dead we would need a basket or blanket to gather the pieces, but she got up from her bed a quarter mile beyond where the shooting was done, and travelled sixteen miles. She must have been one of those individuals that feel little pain and are not subject to nerve shock. Instances showing this difference could be multiplied by the hundred. Do



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differences in individual resistance account for our wounding some game severely without getting it, while other games goes down and stays down rather easily?

Not every hunter can use a 30-1906 with 180-grain or 175-grain bullets loaded to travel at 2600 or 2700 feet per second, a 405 Winchester, a 280 Ross, a 45-70 High Velocity, or other rifles of similar character. Those who do carry inferior calibres, of classes 1, 2 and 3 should make a point of understanding the limitations of their bullets. If it is possible to kill deer with a 22 rim-fire, it is easier to do so with a 30-30 provided care is taken to put the bullets into fatal spots. Users of the inferior rifles should therefore try strenuously to get their bullets into brain, backbone or heart, and always should avoid shooting when no fair chance to do so offers. Users of 22 High Power, 250-3000, 256 Newton and the like should work to get the same hits, but may in addition take paunch and neck hits if easier to land on those spots. It is only the man who uses one of the 405, 30-1906 or 280 Ross, 45-70 or similar rifles who can take his game as it comes, and knock each specimen down to stay with whatever running shots may be offered.

Powerful rifles are deadly. By that same token they destroy less game than half-way rifles like the 30-30. *They do so because they kill the first specimen hit.* A friend of mine who loves to hunt has not been in the woods for ten years. In the fall of 1910 he came from camp sick with disgust at himself. It had been his bad luck to wound one after another, three bucks—mortally, it was judged, from all signs—before he succeeded in getting one to bring home. He was using a 30-30. that is typical 30-30 work.

—John Lynn, in *Rod and Gun*, Canada.

THE subject of the boat-tailed bullet is the leading topic of interest in the rifle-shooting world at the present time, and articles dealing with the theoretical side of the problem have already appeared in the American technical journals, and elsewhere.

But the question remains, **Boat-tail Bullets.** will the bullet of the proposed new construction be of practical use, or, shall we say, be of such practical use that the increase in range obtained, combined with accuracy, is worth while?

So far as practical experience of bullets with pointed or chambered tails goes, we are confined to the experiences recorded with the Krnka bullet (with sabot at base and central longitudinal hole), and to the Whitworth bullet of 1854 which was boat-shaped fore and aft.

The Krnka bullet undoubtedly gained in velocity, but it lost considerably in accuracy, and for the latter reason it was not proceeded with. The Whitworth bullet gave a mean deviation of 1,100 yards range, which was less than one-third that of the Enfield rifle of the period, besides gaining in velocity. This latter bullet perhaps owed something to the hexagonal form of rifling employed, and to the fluting on the bullet envelope. In any case it was of all round improved construction to the existing service bullet, and so can hardly be quoted as an example of the success of boat-tail's bullet shooting.

Notwithstanding, however, all previous

failures to produce a practical and satisfactory design of the boat-tail bullet, it is interesting to note that the Americans are testing the possibilities of the new bullet at their Florida testing grounds. We may be sure that the many keen, practical and scientific rifle shots on the other side of the Atlantic will not miss the opportunity of exhausting every experiment suggested with the end in view of making the bullet a practical success. In the present writer's opinion there is considerable doubt as to whether the suggested increase in ballistic power will be so great as the theoretical arguments would indicate, but this can only be determined when firing results come to be fully analyzed. The figures that have been advanced by Mr. J. R. Bevis in the *Journal of the United States Artillery*, in stating the case for the boat-tail bullet, cannot be questioned when they are submitted to theoretical analysis, but the writer is in agreement with those critics who maintain that the figures given are, to say the least, surprising. In short, they are really too good to be true.

What is it that occurs when a bullet is shot from a rifle? Below cavitation velocity (about which speed, by the way, there seems to be some doubt) there is no advantage to be gained by boat-tailing the bullet. So, for instance, for the miniature rifle .22 bullet, which has a velocity about 1,000 or 1,100 feet per second, there is no question of improvement in shooting in this respect. In any case, in the present form of the .22, whatever velocity was given it, it is doubtful whether any advantage would be gained. It is leaden and uncovered, and the base would be pressed from the boat-tail shape to the cylindrical before it passed out of the barrel, in the same way as the leaden shot of an air-rifle is affected.

For bullets with velocities above the cavitation velocity—and this includes all military varieties—the bullet undoubtedly starts with a vacuum in its rear. The question undoubtedly arises as to the nature of this vacuum. How far is it complete, and to what length does it extend behind the bullet?

Regarding the first of these question—what is the nature of the vacuum, and how far is it complete—it is entirely upon the answer given to this that the accuracy of such figures as are quoted by Mr. Bevis depend. The possibility is that the region immediately behind the bullet's base is never more than a partial vacuum, and if this is so, only a questionable percentage of the improvement in ranging power given by the theoretical calculation (which assumes a complete vacuum) would hold good.

The second question as to the length to which the vacuum extends, is also of great importance. When photographs of bullets in flight, such as those of Professor C. V. Bove, F.R.S., are examined, it is to be seen that the air is actually affected and disturbed for some distance—many lengths of bullets in fact—at the base. What the nature of the disturbed area is can only be conjectured, but it would seem that, in order to fully compensate and allow for the presence of a vacuum or partial vacuum, it would be necessary not only to boat-tail a bullet, but actually to point the base with a long slender taper quite out of all practical consideration.

Consider the case of the short Lee-Enfield rifle, firing the Mark VII. bullet. The de-

tails of this combination are as follows:

Muzzle velocity, 2,440 f.s.

Range, 200 yards.

Remaining velocity, 2,014 f.s.

Now a force of 15 lbs. to the square inch on the base of the Mark VII. bullet is calculated to be equal to 1.14 lb., and the total resistance offered to the bullet at the average velocity of 2,227 f.s., over the 200 yards range, as determined by the air resistance experiments, is 1.83 lb., so that there remains but 0.69 lb. directly attributable to air resistance. As we see from the table of particulars given above, the air resistance of 1.83 lb. is responsible for diminishing the speed of the bullet over the 200-yard range by 426 feet per second. Giving the effect of the vacuum its full value, this 426 feet per second is reduced to 161 feet per second, thus:

$$\frac{0.69 \times 426}{1.83} = 161 \text{ feet per second.}$$

The reduction of the resistance of the air to an amount which is not much more than one-third of the value tabulated in the air resistance tables of our latest experiments is too wholesale a reduction to be readily believable. It is obvious that as we reduce the amount of the force commensurate to the complete vacuum, and consider a partial vacuum, so we increase the value of air resistance and thereby increase the retardation.

Mr. Bevis obtains his figures by the reduction of the air resistance at a velocity of 2,227 f.s. to 0.69 lb. This is the very maximum reduction, and it is, in the writer's opinion, far from being a practical one. The probable truth is that the reduction is only a small one, but what this reduction actually is can only be deduced from actual experiment.

Finally, the crux of the whole question is the combination of accuracy with the maintenance of speed. Unless there is accuracy, the advantage of extra ranging is not of much value, and it is in keeping the present accuracy of the service ammunition with the boat-tail variety that will be a matter for anxiety in the forthcoming experiments. The discussion of such matters as the erosion of the barrel, which would in all likelihood be increased, with the new design, is outside the present consideration.—Lieut. E. C. Fisher, in *The Shooting Times and British Sportsman*.

THOSE RELINED TWENTY-TWOS

(Concluded from page 5)

with which it has been put in. I know of several relining jobs which are every bit as good as mine, and I know of one which is punk. The owner has tried lapping without success, and he is going to have the tube melted out and another one put in when he gets around to it. The probabilities are that he will get a wholly satisfactory job next time.

In conclusion, the relining stunt is all right; it is to be recommended. If you want a good .22 and don't want to pay the price that is being charged for .22's these days, you can shop around and pick up for a small sum one that is all right in every way except for the barrel. Relining and parcel post will cost you under ten dollars, and there you are.

If you want a heavy single shot .22 for target work get one of the beautiful old time target guns, Sharp, Ballard, Winchester or Remington—the calibre and internal condition is immaterial—and have it relined. The cost will be more, of course, for an extractor must be made .22 size and firing pin changed. In a case of this kind it is best to get first an estimate as to cost.

THESE Clubs have been admitted to membership in the National Rifle Association of America

Arkansas:

Dardanelle Rifle Club, of Dardanelle. Sec'y, J. F. Alexander; Pres., Lee J. Moses; Vice Pres., W. L. Fowlkes; Treas. M. M. Flater; Exec. Officer, Jeff Ellis. 31 members.

California:

Biggs Rifle Club, of Biggs. Sec'y, Ray E. Chatfield; Pres., William Cummings; Vice-Pres., F. Fansler; Treas., John Elder; Exec. Officer, Charles Cox. 21 members.

Santa Paula Rifle Club, of Santa Paula. Sec'y, E. D. Stuart, 720 West Santa Paula st., Santa Paula, Calif.; Pres., A. C. Hardison; Vice-Pres., R. R. Peacock; Treas., L. S. Lothridge; Exec. Officer, F. G. Schulze. 25 members.

Suisun Rifle Club, of Suisun. Sec'y, John R. Nichelson, Suisun, Calif.; Pres., F. A. Starmer; Vice-Pres., T. Chlowdell; Treas., Lester Gawthrop; Exec. Officer, L. J. Hayes. 34 members.

Connecticut:

Byram Rifle Club, East Port Chester. Sec'y, W. A. Reynolds, High st., Port Chester, New York; Pres., Rudolph Goettel; Vice-Pres., Frank Reichert; Treas., Peter Feder; Exec. Officer, Joseph Novak. 15 members.

New London Rifle Club of New London. Sec'y, Wm. M. Stark, 144 Huntington st., New London, Conn.; Pres., O. H. Schroeter; Vice-Pres., P. A. Savage; Treas., L. A. Newby; Exec. Officer, B. Stark. 32 members.

District of Columbia:

George Washington Post R. C. (of the D. of C. Dept. of the American Legion), Washington. Sec'y, Henry G. Ludke, 3516 Conn. ave. N. W., Wash. D. C.; Pres. Albert E. Hash; Vice-Pres., Philip E. Taylor; Treas. A. L. Giacomini; Exec. Officer, Earle T. Mutersbaugh. 14 members.

Stuart Walcott Post No. 10 Rifle Club, D. of C. Dept., the American Legion, Washington Sec'y-Treas., James R. Morford, room 420 War Risk Bldg., Washington, D. C.; Pres., Francis S. Harris; Vice-Pres., Henry C. Behneman; Exec. Officer Alexander M. Bremer. 27 members.

National Capital Post No. 127, Veterans of Foreign Wars Rifle Club, No. 1, Washington. Sec'y, Abraham Emlaw, 2149 N st. N. W., Washington, D. C.; Pres., Capt. Edward Grant; Vice-Pres., H. C. Bonault; Treas., G. E. Frazier; Exec. Officer, W. D. Douty. 15 members.

National Capital Post, No. 127, Veterans of Foreign Wars Rifle Club, No. 2, Washington. Sec'y, James S. Lay, 6925 Ga. ave. N. W., Washington, D. C.; Pres., Theodore A. Lay; Vice-Pres., Henry Lovelace; Treas., W. A. Lyons; Exec. Officer, W. H. Kay. 15 members.

National Capital Post, No. 127, Veterans of Foreign Wars Rifle Club, No. 3, Washington. Sec'y, Elmer E. Tull, 1314 6th st. S. W., Washington, D. C.; Pres., Hoen Spreckelmer; Vice-Pres., Wm. S. Wise; Treas., E. J. Stubbs; Exec. Officer, Wm. C. Whipp. 15 members.

Idaho:

Kootenai Post, No. 14, American Legion Rifle Club, Coeur d' Alene, Idaho. Sec'y, Clyde C. Hodge, Press Pub. Co., Coeur d' Alene, Idaho; Pres., James C. Euenden; Vice-Pres., Henry Dewald; Treas., H. Wolf; Exec. Officer, O. L. Cornwall. 70 members.

Illinois:

Chicago, Burlington and Quincy Railroad General Office Rifle Club, 547 W. Jackson Blvd., Chicago. Sec'y, E. G. Geissert, Suite 1004, 547 W. Jackson Blvd., Chicago, Ill.;

Pres., John E. Deckert; Vice-Pres., Geo. H. Horton; Treas., C. A. Davis; Exec. Officer, Major W. A. Hill. 70 members.

Cyril Blaul Rifle Club of General Lloyd Wheaton Post, No. 74, Veterans of Foreign Wars, Chicago. Sec'y-Treas. Harry E. Stewart, 5237 N. Winchester Avenue, Chicago, Ill.; Pres., B. B. Bulwa; Vice-Pres., Arthur Meyer; Exec. Officer, E. A. Mculler. 15 members.

Lawndale-Crawford Post Rifle Club, Chicago, Ill.; Sec'y, John J. Sladek, Schoenhafen Co. Chicago, Ill.; Pres., Albert B. Holecek; Vice-Pres., Jos. R. Gregory; Treas., George J. Malek; Exec. Officer, James Kral. 19 members.

Indiana:

Attica Rifle Club of Attica. Sec'y, Lee Whitehall, Attica, Ind.; Pres., Sheral K. Olchy; Vice-Pres., J. L. McGord; Treas., B. S. Orr; Exec. Officer, William T. McMurtire. 11 members.

Connersville Rifle Club, Connersville, Ind. Sec'y, M. H. Murley, McFarlan Motor Corp. Connersville, Ind.; Pres., Charles O. Warfel; Vice-Pres., Harry A. Wainwright; Treas., Vivian Ludwick; Exec. Officer, Claude L. Smith. 23 members.

Michigan City Rifle Club of Michigan City. Sec'y, Clifford W. Craig, Box 41 (Ind. State Prison), Michigan City, Ind.; Pres., Earl D. Brown; Vice-Pres., Henry J. Karras; Treas., Henry Miller; Exec. Officer, Lorenz D. Schmuhl. 18 members.

Iowa:

The Davenport Police Dept., Rifle Club of Davenport. Sec'y, Wm. G. Ruhl, Police Station, Davenport, Iowa; Pres., Charles Boettcher; Vice-Pres., Charles F. Schlueter; Treas., John T. Kinney; Exec. Officer, Wm. P. Hennelly. 10 members.

Nichols Rifle Club of Nichols. Sec'y, J. G. Croutcup, Nichols, Iowa; Pres., William Wettleaf; Vice Pres., Ben Smith; Treas., Harry Shannon; Exec. Officer, Clyde Park. 34 members

MILITARY RIFLE CLUBS

Utah:

Fort Douglas Rifle Club. Sec'y, Lieut. B. F. Lemaster, Inf., Fort Douglas, Utah; Pres., Lt. Col. F. L. Graham; Vice-Pres., Lt. Col. R. R. Glass; Treas., Capt. W. M. Goodale; Exec. Officer, Capt. Fred Walters. 14 members.

Virginia:

Fifth Engineers Rifle Club, Camp A. A. Humphreys, Va. Sec'y, Andrew J. Coleman, Camp Humphreys; Pres., Fred H. Kelsey; Vice-Pres., Clide H. Burks; Treas., Chas. R. White; Exec. Officer, Jos. Mclaughlin. 78 members.

Officers Rifle Club, Camp A. A. Humphreys, Va. Sec'y, Capt. H. H. Brawn, Camp Humphreys; Pres., Lt. Col. V. Vinton Birch; Vice-Pres., Major H. Brooks Price; Treas., Capt. H. H. Brawn; Exec. Officer, Capt. E. R. Elsm. 73 members.

Service Club Rifle Club of Camp A. A. Humphreys, Va. Sec'y, Paul Holup, Utilities Detachment, Q. M. C., Camp Humphreys; Pres., H. W. Kirchner; Vice-Pres., H. E. Ferrier; Treas., Chas. Lynn; Exec. Officer, Ernest J. Marris. 41 members.

BOY'S CLUBS.

Iowa:

Sure Shot Rifle Club, Ida Grove, Iowa. Sec'y, Paul Jordan, Ida Grove; Pres., Ross Latchaw, Jr.; Vice-Pres., Russell Hess; Treas., Dohren Wiggert; Exec. Officer, Alverne Robertson. 10 members.

Massachusetts:

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New York:

Troop 111, Boy Scouts of America Rifle Club, Bedford Branch, Y.M.C.A., 420 Gates ave., Brooklyn, N. Y. Sec'y, B. F. Hallowell, 160 Jefferson st., Brooklyn; Pres., A. B. Carlson; Vice-Pres., Wm. Seibert; Treas., Fred N. Patcher; Exec. Officer, A. B. Carlson. 19 members.

Ohio:

Ashland Junior Rifle Club. Sec'y, J. Cresco McHose, The Lincoln Inn, Ashland, Ohio; Pres., Arthur Frenz; Vice-Pres., David Lutz; Treas., Joseph Thomas; Exec. Officer, Arthur L. Rybolt. 16 members.

Boy Scouts Troop 65 Rifle Club, Cleveland. Sec'y, James Connolly, 1472 West 112th st., Cleveland; Pres., Paul C. Davis; Vice-Pres., Robert Freer; Treas., Karl Keller; Exec. Officer, Frederic Schramm. 12 members.

West Virginia:

Dunbar Boys Rifle Club, Dunbar, W. Va. Sec'y, James Hardin, Dunbar; Pres., Page Adams; Vice-Pres., Leo Arthur; Treas., Melvin Gabbert; Exec. Officer, Glenn Baker. 18 members.

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Dr. Lincoln Riely, Wisner, Nebraska.

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Paul F. Lahm, 57 East 15th st., Brooklyn, N. Y.

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FOR SALE—1 Marlin Repeating Shotgun (12 gauge), \$30.00. 1 Savage Automatic pistol, .32 cal., and black leather pocket holster. Both in new condition, \$15. Chas. G. Zettler, 667 E. 161st st., New York City.

WANTED—Lyman No. 103 rear sight to fit Stevens No. 414 rifle; .22 cal. Winchester musket. Both in crank's condition. C. T. Patterson, 843 Napier ave., Lawrence Park, Erie, Pa.

FOR SALE—Very fine Goertz "Certa" 4½ power rifle scope, windage and elevation adjustments. Perfect condition. \$60.00. Major T. D. Sloan, 41 W. Kirke st., Chevy Chase, Md.

FOR SALE—Lyman 103 Micrometer Windgauge Rear Sight, mounted on Springfield cocking piece, complete, new, never used. \$10.00. H. C. Kennicott, 123 W. 15th st., Little Rock, Ark.

WANTED—.50 cal. Remington pistol, Army Model, in good condition; .44 S. & W. Military Target Model in perfect condition; Springfield 1903 action, no objection to worn or pitted barrel if action is O. K. E. H. Coward, Miners Savings Bank, Pittston, Pa.

FOR SALE—One new Mannlicher-Schonauer 6.5 mm rifle, absolutely perfect in every respect. Price \$100.00. One .22 Savage N. R. A. musket, 1919 model, price \$25.00 or will exchange for new Krag rifle or carbine. H. D. Dodge, care of Gray Tractor Co., Inc., 30th ave. S. E. and N. P. Tracks, Minneapolis, Minn.

FOR SALE—One brand new Remington Single Shot, .50 calibre, Army Model for making over into target pistol. \$18.00. L. D. Bolton, 2215 Dime Bank Building, Detroit, Mich.

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FOR SALE—One Remington 12 gauge pump gun, full choke. Barrel perfect. Outside 85% new. Price \$35.00. \$10.00 down, balance C. O. D. One Stevens 12 gauge pump full choke, special checked, oil finished stock. Shot less than 100 times, like new. Price and terms same as above. Both of these guns are in perfect mechanical condition and are exactly as represented. V. F. Shafer, Box 535, Needles, Calif.

FOR SALE—5 x 7 photos of National Match winners, including Capt. van Amburgh, Lt. Yancy, Lt. Fody, Sgt. Thomas, Crawley, Andrews, Hessian, Marjorie Kinder, Whitaker, the "Florida Big 4", Herrick Trophy team and International Small Bore Team. 50c each postpaid. R. E. Herrick, Box 1447, Boise, Idaho.

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WANTED—Any style of 12 gauge shotgun in fair condition, cheap for cash. Harold D. Decker, Norfolk, Ark.

FOR SALE—850 .30-06 cartridges, F. A. '10, in excellent condition, \$30.00. WANTED—Accurate powder scales. C. E. Nordhus, 51 S. 13th st., Minneapolis, Minn.

FOR SALE—One New Mannlicher-Schonauer 6.5 mm rifle, absolutely perfect in every respect. Price \$100.00. One Savage N. R. A. musket, 1919 model. Price \$25.00 or will exchange for new Krag rifle or carbine. H. D. Dodge, care of Gray Tractor Co., Inc., 30th ave. S. and N. P. Tracks, Minneapolis, Minn.

FOR SALE—38-40 Bisley Colt, 4¾-inch barrel, gun-crank condition, with about 100 soft nose bullets, shells and primers. First check \$30.00. J. M. Aman, 117 Essex st. Haverhill, Mass.

FOR SALE—Few new Springfield parts. Send stamp. Curtis G. Holmes, 112 Hartford ave., W., Detroit, Mich.

FOR SALE—.22 Savage N. R. A., new, \$24.00. No. 1A gr. autographic kodak F. 7.7, carrying case and portrait attachment, \$24.00. Wanted—3-A Special kodak. R. B. Wasson, 1109 S. Frisco, Tulsa, Okla.

WANTED—Newton .30 '06 reloading tool, 172 grain copper jacketed soft point bullets. Ideal muzzle resizer for No. 10 tool. .30'06 cal. powder scales, and F. & A. 1920 Match Ammunition. Give full description in first letter. George Gierl, Wildwood, Pa.

FOR SALE—.45 Colt Automatic, pre-war, gun-crank condition, 4 pound pull, fine target pistol, 3 magazines, Webb belt, leather holster, hundred rounds, \$45.00. .30 Springfield ammunition, \$4.00 per hundred. .45 Auto, \$3.50 per hundred. .38 Special, \$2.85 per hundred. T. G. Lively, 3917 N. Tripp ave., Chicago, Ill.

WANTED—Ideal bullet mould 319162. Must be in first-class shape. Ethan Alger, 214 Arizona ave., Loraine, Ohio.

FOR SALE—.22 cal. Niedner-Springfield, excellent condition; Mann-Niedner telescope blocks, f.o.b. N. Y., \$60.00. J. A. Baker, Jr., 314 West 88th st., New York City.

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FOR SALE—Colt Automatic Pistol, cal. .45; Colt revolver, cal. .32 W. C. F. 6-inch barrel, mould and reloading tool; S. & W. revolver .22 cal. 6 in. barrel. Mannlicher rifle 8 mm. peep sight on bolt. Joseph L. Carroll, 30 Greene st., Amsterdam, N. Y.

Statement of the Ownership, Management, Circulation, etc., required by the Act of Congress of August 24, 1912, of ARMS AND THE MAN published semi-monthly at Washington, D. C., for October 1, 1920.

District of Columbia, ss.

Before me, a Notary Public in and for the District of Columbia, aforesaid personally appeared Fred H. Phillips, Jr., who, having been duly sworn according to law, deposes and says that he is the editor of ARMS AND THE MAN and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

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(Signed) FRED H. PHILLIPS, Jr., Editor.

Sworn to and subscribed before me this 30th day of September, 1920.

[Seal] SADIE E. ROBERTS,
Notary Public, D. C.

My commission expires March 27, 1925.

WINCHESTER

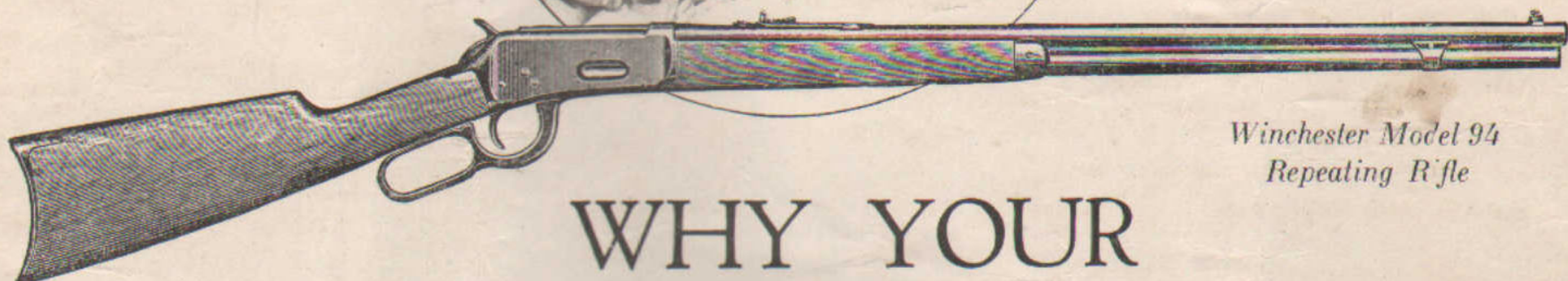
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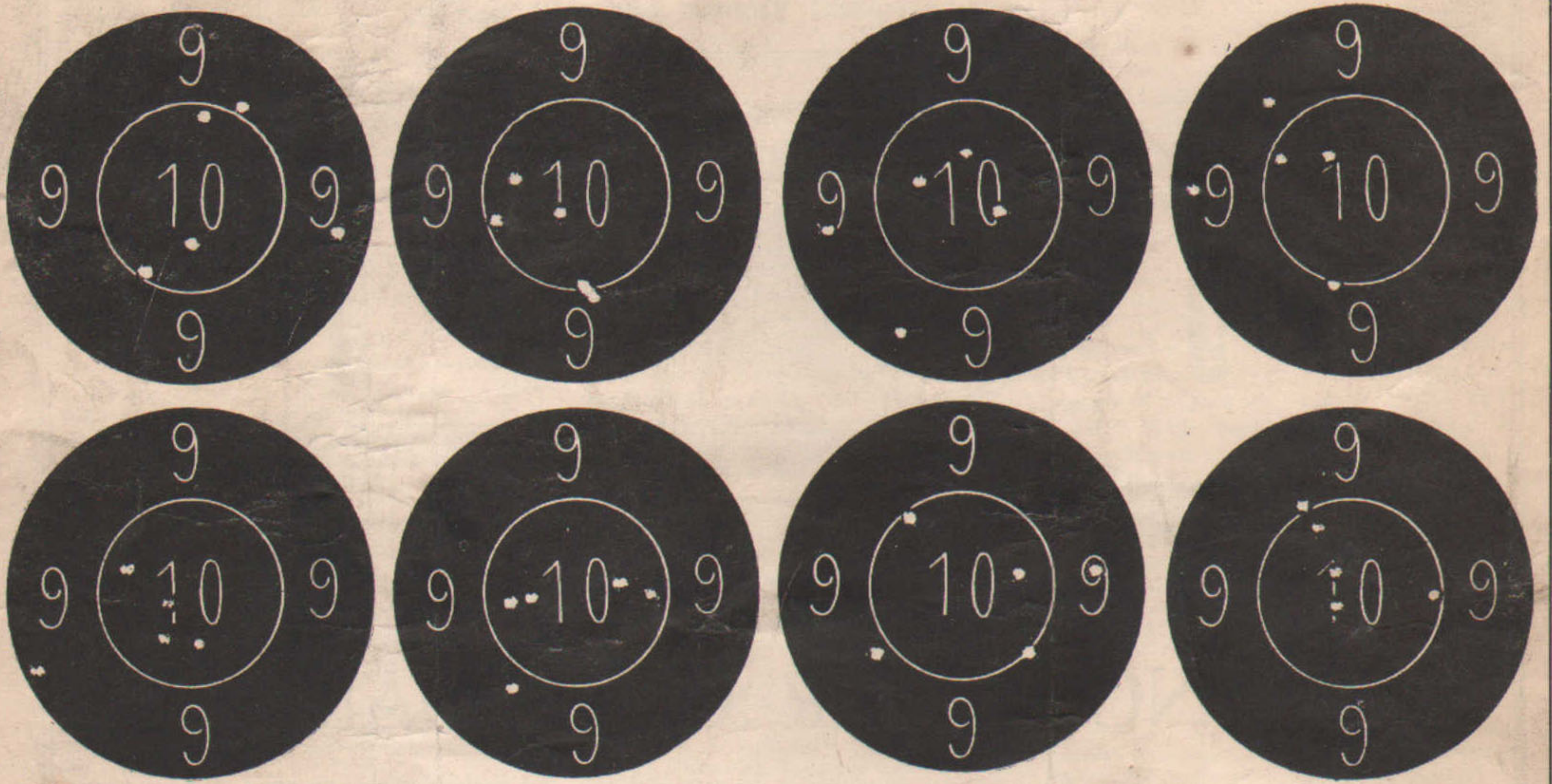
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