



WINCHESTER

Repeating Rifles

For All Kinds of Shooting.
All Desirable Calibers and Weights

A FEW FAVORITES FOR HUNTING.

Model 1895. 30 Army caliber, weight 8 1-4 pounds.
 Model 1894. 30 W. C. F. caliber, "Extra Light," weight 6 1-2 pounds.
 Model 1894. 20 W. C. F. caliber, "Take Down," weight 7 3-4 pounds.
 Model 1892. 44 and 38 caliber, "Take Down," weight 7 pounds.
 Model 1886. 45-70 caliber, "Extra Light," weight 7 pounds.



Shoot Winchester Ammunition. Made for all Kinds of Guns.

FREE.—Send Name and Address on Postal for 158-page Illustrated Catalogue.

WINCHESTER REPEATING ARMS CO., . . . NEW HAVEN, CONN.

No More Rust

3 in One Oil



An absolute preventive of rust. An ideal cleaner. A perfect lubricant.

For Bicycles, Fire Arms, Typewriters, Sewing Machines, and all bright (or polished) metals.

Manufactured by
G. W. COLE CO.
141 Broadway, New York City

Dept. B. Sample Bottle Sent for Canadian 2c Stamp

BRITISH AMERICAN HOTEL
WINDSOR, ONT.

LEADING HOTEL IN THE CITY.
SPECIAL RATES FOR TOURISTS.
T. W. MCKEE, PROPRIETOR.

HAMILTON POWDER CO.

HAS MANUFACTURED
SPORTING GUN POWDER

Since 1865, as a result you have "CARIBOU" made from best materials, perfectly put together. "DUCKING" hard pressed, slow burning, keeps well under all conditions. "SNAP SHOT" high velocity, moist residuum cheap. The powder for every day use.

ENGLISHMEN SAY
Powder can be bought in Canada as good as ever put in a gun. It has a positive advantage over home make, the dirt is soft.—J. J. W. in London Field.

AMERICANS SAY
The finer English or American Powder and Canadian "Caribou," I am quite familiar with. They give so little recoil that one may shoot all day without bruised shoulder or headache.—Forest and Stream.

CANADIANS ABROAD SAY
Can you send over some Trap? I don't mean to flatter but it is ahead of anything we get here.—A. W. W., Latvia, N. Y.

The Balmoral Hotel

MONTREAL

Offers special inducements to Tourists and Strangers visiting the city. Rooms large, airy and comfortable. Fitted with all modern conveniences. Very central, being within easy distance of railway depots, steamer landings, &c.

A. ARCH. WELSH, Prop.



In point of cuisine and equipment, THE ROSSIN is the most complete, the most luxurious of modern Ontario hotels. The rooms, single or en suite, are the most airy and comfortable in the Dominion. The Union Depot and Wharves but two minutes' walk.

A. & A. NELSON,
Toronto, Ont. Proprietors.

CONTENTS.

	PAGE.
Frontispiece—Mount Burgess, from head of Emerald Lake, near Field, B.C.	
Editorial	295-296
Incidents of a Troutng Trip, by Emile Meddon	296-297
Big Game in Eastern Canada, by Chas. A. Bramble	297-298
Hints on the Camp Fire	298
Hunting Matters, by C. Jno. Alloway	299
Game Destroyers, by "Bob White"	300
Forestry Department	300-304
At the Kennels, conducted by D. Taylor	305-307
The Gun, conducted by "Bob White"	308-311
Amateur Photography, conducted by H. McBean Johnstone	312-314



LABATT'S ALE AND PORTER

IS THE BEST IN
THE MARKET.

CUT FLOWERS

Floral designs for all occasions
L. H. Goulet

Member Canadian Hunt Club

Special Rates to Club Members. 1911 St. Catherine Street, MONTREAL

ROD AND GUN IN CANADA

DEVOTED
TO
THE
FISHING
AND
GAME
INTERESTS
OF
CANADA.

One Dollar Per Annum.

MONTREAL, AUGUST, 1900.

Single Copies Ten Cents.

PUBLISHED MONTHLY.

SUBSCRIPTION RATES:

ONE YEAR, . . . ONE DOLLAR.
SIX MONTHS, . . . FIFTY CENTS.
PAYABLE IN ADVANCE.

ADVERTISING RATES:

TWO DOLLARS PER INCH PER ISSUE.
A discount of 15 per cent. on annual contracts.

Communications on all topics pertaining to fishing, shooting, canoeing, the kennel and amateur photography, will be welcomed and published, if satisfactory. All communications must be accompanied by the name of the writer, not necessarily for publication, however.

ROD AND GUN IN CANADA does not assume any responsibility for, or necessarily endorse, any views expressed by contributors in these columns. All communications should be addressed to:

ROD AND GUN PUBLISHING CO.,
603 Craig Street, MONTREAL.

Our frontispiece this month shows one of those stupendous mountains for which Canada has become famous—Mt. Burgess—the view being taken from the head of Emerald Lake, B.C. We have tried from month to month to present on our cover page some of Canada's scenic masterpieces, believing a change of cover each month is preferable to a set design, and we hope this idea has met the approval of our subscribers.

The North American Fish and Game Protection Association, at its first annual meeting, February 2, 1900, passed a resolution reading: "That it is the sense of this meeting that, in the general interest of fish and game protection, it is desirable to as far as practicable harmonize the game and fish laws of the provinces and states represented at this meeting." A committee was appointed to give effect to the resolution, and we are informed that the committee will be called together in the autumn or early winter in time to enable the members to make recommendations to the respective legislatures. The work before this committee is difficult and will require great consideration, and undoubtedly the views of many persons qualified

to speak will be asked respecting the proposed changes. There is much to be said on all sides, and ample room for discussion. For example, Ontario's open deer and moose season is from November 1st to 15th, and moose may be killed only every third year, while in the bordering counties of Pontiac and Ottawa in Quebec the open season every year for both deer and moose is from October 1st to November 30th. The Ottawa River and Lake Temiskaming form the dividing line between the two provinces. Is Ontario's season too restricted or Quebec's season too long, and is there some middle ground on which the advocates of both can agree? In the portion of Quebec nearest New Brunswick the open season for deer and caribou commences September 1st, and the sister province permits hunting to commence September 15th. In this case it would appear reasonable to make both commence September 15th. Appreciating the difficulty and magnitude of the task before the committee, ROD AND GUN IN CANADA is desirous of assisting them in their work, and believes a desirable means of doing so is to ask for expressions of opinion from its readers as to the best means of reaching the desired result. Those who do not wish their letters published or who wish their names withheld will please so indicate. Now, gentlemen, we shall be glad to hear from you, either all at once or as you find it convenient to write, and be assured that all opinions will be welcomed.

In the preface to his latest book W. W. Greener says: "From long connection with firearms and intercourse with the foremost users of them, I am convinced that any one can become an efficient marksman. The object of this book is to * * * direct those who don't shoot at all to the practice of the most interesting amusement the century offers." There

are some readers of ROD AND GUN who do not shoot, and to them especially we commend the full consideration of the quotation just made. Rifle shooting at a target is a game of skill, and to excel at it requires considerable practice. Unlike some other games of skill the nation is likely to have pressing need of its results, and it certainly is not against a sport that its training is at any time of need instantly convertible into practical business; on the contrary, it is a means of combining pleasure with possible business.

The government of Switzerland requires rifle practice of all its able-bodied men of specified ages, and it supplies material for practice at less than cost and permits each man to keep his rifle at his house, subject to periodic inspection, and he can use it for practice as much as he pleases. We believe that the Swiss idea is suitable to Canada. It is the medium between compulsory military service and the present status. Compulsory military service is not only highly objectionable for many reasons, but absolutely unnecessary. Smokeless powder and high power magazine rifles have so changed the face of warfare that the individual is now probably the important factor, and his training as a marksman must be secured irrespective, or otherwise, of his knowledge of drill. Every man can become more or less expert as a rifleman with practice and without practically any loss of time from his business. The undisciplined Boers' expert shooting has been an object lesson of the strongest kind.

Dr. David Starr Jordan, president of the Leland Stanford University of California, and one of the most distinguished ichthyologists of to-day, is a man we approve of. In a preface to a volume, "Familiar Fish," by Eugene McCarthy, Dr. Jordan says: "Every healthy boy, every right-minded man,

and every uncaged woman feels, at one time or another, and maybe at all times, the impulse to go a-fishing. That is what fishes are for—to call us away from newspapers and counting-rooms, school books and parlors and five-o'clock teas, out into the open of existence, where life is real and banks are green, skies are blue, and the birds sing in the branches over the water. It does not matter much what fishes are in the streams. Still less is it essential that we should succeed in catching them. The main thing is the breaking away, the going in search of them, the generous feeling of brotherhood, and that trusting of ourselves to the lap of our generous mother, which we have inadequately called communion with Nature. Yet it is well to know in advance something of where we are going, what fishes we shall find, and with what means we shall call them forth to suit our pleasure. To give this is the purpose of this book. Its writer is a successful angler. He is a good fisherman. He would teach others to be successful. Not that he would train them to be fish hogs, or teach them to make a longer string or fill a bigger basket than any hogs before them. These things are abhorred of gods and sportsmen. It is better far to lie about your great catch than to make it. The fisherman's lie is natural and sportsmanlike; his greed is not. It is, I am sure, the wish of the author that the reader should make his catch in sportsmanlike fashion, that he should learn to love the streams and their inhabitants, and that so loving, as the seasons go on, he should return to river, rod, and fly again and again, finding each year in the stream the fishes that his need demands. For it is written that to be 'born beneath the fish's sign' is to bear through life the subtle influence of the 'happiest of constellations.' "

Three capercaillie have been imported by the Crown Lands Department, Ontario, for the purpose of stocking the Provincial parks. They were sent on to Rondeau Park, and careful observations will be made of the manner in which they adapt themselves to climatic conditions in the Province. The intention is to introduce them eventually into Algonquin Park, in northern Ontario. The climate there is somewhat similar to that of the Highlands of Scotland, where the birds find their home, and the conditions of vegetation are much the same.

The general distribution of fish by the Ohio Fish and Game Commission will begin about September 1. There are 300,000 black bass and 1,000,000 catfish ready.

INCIDENTS OF A TROUTING TRIP

By Emile Meddon

Some ten years ago, in company with my old, reliable camping friend Alf., I visited a lake in the Laurentian range of mountains to the west of Ottawa. On the 22nd May we drove out twenty-five miles, then portaged our duffle for a distance of five miles through a nicely wooded bush and a

where we had been directed to make our quarters. The tent had just been pitched when up came a thunderstorm (I always experience it that way on my trips), which lasted with much fury for over an hour. Darkness creeping on and physically tired, we made a rough and ready supper. Then a pipeful of tobacco vanished in smoke, a glass of Permu as a night-cap, and when we resigned our fate to the caresses of Morpheus everything pointed to more rain.

The next morning we rose when the light was just beginning to lift up the black mantle spread over everything. I went in



Teaching the Young Idea.

beaver meadow where mosquitoes swarmed in millions and freely introduced themselves into us without any of the usual formalities of etiquette. Before reaching our destination we had to cross a narrow creek, four feet deep at the time, on a log which had been placed diagonally on this running stream. Here I came in for an unpleasant and unforeseen ducking. With the heavy load on my shoulders, I lost my equilibrium, and the next moment I was splashing in the pool below. When I got out I presented a pitiful sight; not that I was hurt, but soaked and muddy from head to foot. At last we reached the lake, a beautiful one about half a mile in diameter, with clear crystal water. Nearby we found an old cedar raft which we used to get across to a suitable camping ground

search of dry wood, and shortly after Alf., in a stentorian voice shouted to me, *B-r-e-a-k-f-a-s-t R-e-a-d-y.* The menu was very modest; frogs' legs caught the previous evening, good hot tea, toast and cakes; however, we did justice to the spread. The weather was unexpectedly fine; Old Sol had now full control, and how we appreciated bathing in his warming rays unstained by the slightest of clouds or atmospheric haze.

The time had come to draw the line somewhere, so from a rock near the shore we lured the wily trout with minnows, and succeeded in capturing six three-pounders, quite enough for our use, as we were decent lovers of the rod and line.

In the afternoon the peaceful state of the surroundings was suddenly broken by im-

perative calls from the other side of the lake, for the raft. "Hurry up, boys," "Come here you fellows," and other commands of the like. Alf. went over, and to his surprise, met a party composed of men working in the mines some miles away. There was exactly a baker's dozen; some of the new comers carried small provision bags, others axes and long bamboo rods. Their lines and other requisites were hidden in their coat pockets. All big, sturdy men were they, accustomed to roughing it in the bush. They came to our camp and soon had selected and fixed up a covered cooler for the night, for they carried no tent. We found them to be good fellows in every way, full of fun, but very inexperienced in what I might call ordinary fancy fishing. We much enjoyed the fish, game and other stories (they were loaded with them) related by them around the camp fire in the evening. At 11 o'clock Alf. and I retired, but these men kept awake most of the night, singing and fishing, with little success in the latter pursuit.

Now comes an episode worth telling, and which caused us to suddenly arise with surprise and excitement from our delightful slumber. About one hundred yards away stood an immense dead tree, hollow from base to top; it was nearly fifty feet high. The nocturnal fishermen and singers made a hole at the foot of that tree, introducing therein a lot of dry chips they set a match to them. As may be imagined the draught of such a natural chimney, once the fire had its full feed, was astonishingly loud, not to say frightening, for it resembled the continuous roar of thunder heard from a short distance. My friend woke up first, and not understanding this unusual rumpus, awakened me out of my sleep. I made a jump as if scared by a severe attack of delirium tremens. Getting outside the tent we were offered a grand spectacle. The glare of that standing giant all ablaze showed off to advantage the lake and surroundings, even the foliage of the rocky mountain opposite. For quite a time we witnessed this panoramic effect of the fire led by additional trees cut by the men, but I must say that I expressed my regrets at seeing such a mass of fuel unnecessarily destroyed. The blaze gradually diminished in size and grandeur; darkness came back, and off to our beds we went, there to resume our uninterrupted rest.

The next afternoon the visitors started homeward, but we stayed for two days longer. Our efforts after the finny tribe were fairly well rewarded. We broke up camp satisfied with the outing, though the mosquitoes, the ducking in the creek, the visitors and the midnight fire scare were events not anticipated when making out our programme at the start from the Dominion's Capital.

Big Game in Eastern Canada

By Chas. A. Bramble

EXCEPTING in the very remote regions of the West there is as much big game in Eastern Canada as anywhere in the Dominion. There is an obvious reason for this; in no other part are there such dense forests, excepting always the narrow strip along the seaward side of the Coast Range, as in New Brunswick, Nova Scotia, Quebec, and Ontario. There is nothing which so favors the multiplication of game as a good forest growth covering the face of the land. It affords shelter, and above all, protection from persecution.

In the early days of the Dominion's history the amount of game that seems to have existed was something marvellous. For 250 years the settlers killed moose, caribou and deer, at their own sweet will, yet these animals are by no means extinct, and were their chief enemy, man, to be removed from the scene, would, in a very short time, become as numerous as ever. Nova Scotia has suffered more than her sister provinces. The climate being mild, feed abundant, and snows shoal, the moose had an excellent chance before the coming of the white man, to increase and multiply in Nova Scotia, and we have it on the authority of the earlier historians that they literally swarmed from one end of the Province to another. To-day they have been almost driven from the western counties, though they are yet fairly abundant in the districts eastward of Halifax. The Micmacs of Nova Scotia were adepts at calling, and that has always been their favorite method of getting moose. Some few of the Indian hunters have made an occasional practice of running down the animal on bare ground, but, as may be imagined, this is a tremendous test of endurance. The hunter having started a moose follows along its fresh track, at the best pace he can command, until nightfall. When too dark to distinguish the tracks, he curls up at the foot of a tree, and snatches a few hours rest. At grey dawn he is off again. Sooner or later the moose is once more roused by the approach of his dreaded enemy. Though the animal goes gallantly enough at first, it is probably feeling a little stiff from its exertions of the previous day, and hearing nothing, for

the man is soon hopelessly in the rear, and moose lies down. During the afternoon the snap of a twig, however, warns it that the man has again caught up. Away flounders the moose, weary and thoroughly alarmed, while the man resumes his pitiless pursuit. The Indian has the long lope of the wolf; he is not muscular, but he is a mass of sinews, and has wind such as no college athlete ever yet possessed. That night the man sleeps again with the sky for shelter and the branches overhead for blankets, and before sunrise he has swallowed a few mouthfuls and is again on the trail. In a very short time he has the moose again afoot, and at ever shortening intervals, the unfortunate animal is forced to move on many times during the morning. The ending of the chase usually takes place sometime between noon and sundown on this the third day. The man, seeming but little the worse for his tremendous exertions at length comes within range of the quarry. The moose, utterly exhausted, stiff and sore, panting and hungry, is at the man's mercy—and the mercy of a red-skin is a round ball, two hands-breadth behind the point of the shoulder.

Caribou were once the fellow-partners of the Nova Scotia wilds with the moose, but for some reason, which is not well understood even by the Indians, the caribou have practically abandoned the Province. They were not killed off, and they seemed to vanish without cause. During the 60's they were numerous, but some time in the 70's were absent from the western end of the Province, and although there are a few in the eastern part of Nova Scotia, it is difficult to get a shot, as they are as hard to find as a needle in a hay rack. For caribou in droves like sheep we must visit the Island of Newfoundland. None except those who have visited the Newfoundland barrens can understand the enormous herds of caribou that exist there. They travel in bands 10,000 strong from north to south in the fall, and back again in the spring. The few hundred Indians on the island (Micmacs by-the-by, they having exterminated the Beothics, the original possessors of the land) are powerless to diminish the number of herds; moreover they are

not game butchers. Unfortunately, however, the white man is taking a hand in the slaughter, and dark rumors are afloat of whole schooner loads of stark, frozen deer, shipped each winter of late years to St. John's, and the States. The settlers along the coast go a few miles inland in the autumn, when the deer are travelling, and murder the animals with charges of slugs fired from their sealing guns. It would be a pity were the Newfoundland caribou to become extinct, because it was the finest of its kind, larger and having better antlers than any other variety.

New Brunswick has of late attracted a great deal of attention owing to the indefatigable exertions of a few men. The fact is that the settlements have surrounded the game, so that the caribou and moose have been pretty effectually penned up in between the Miramichi, the Nipisiguit, and the Restigouche. Within this area the animals are tolerably abundant.

The Province of Quebec is composed of such an enormous territory that a volume or two might easily be written as to the merits of the various counties, from a sportsman's standpoint, without exhausting the subject.

North of the St. Lawrence there is an endless wilderness of spruce woods, barren lands, lakes, cataracts and rivers, whose limits no man has followed, and whose immensity is but faintly realized. Moose exist from one end to the other, from the Saguenay to Temiskaming, and in all the south-western counties the Virginia deer is particularly abundant. For moose Quebec is undoubtedly the surest find, excepting, perhaps, portions of northern Ontario and Alaska. The greatest drawback to hunting is that few of the guides are really adepts at calling. They can all make an unearthly, roaring noise, through a folded strip of birch, but even that accomplishment differs by a good deal, and inasmuch as it differs falls short of the musical lowing of the moose cow.

Ontario extends from the Ottawa River to the Manitoba boundary. The northern limits on the maps are a pretty dotted line, which seems clear enough, but it is to be feared that voyageurs fail to find any dotted lines on the surface of the Laurentian highlands, and it is quite possible to wander back and forth from Ontario into the Hudson's Bay Territories without realizing the fact. Eastern Canada may be considered to end, on the parallel which holds Port Arthur. Southern Ontario has become rather too densely settled to have remained a good big game region. It is wonderful how the deer manage to hold

their own so well, seeing the vast army of hunters which annually seeks to encompass their destruction; but they hold their own nobly, and the Ontario Government seeks to assist them by well meant, but probably futile close seasons. The official idea of protection is to prohibit all shooting during certain years—which means that sportsmen have to refrain, while others kill merrily, fearing neither the law nor remorse of conscience.

The best part of Ontario, and a very good one it is, includes the territory west of Temiskaming, almost to White River. Lake Temagami is the centre of a fine range, and one which furnishes about as much varied sport as any part of the Do-

of his canoe, while his guides pole him luxuriously up stream, is having a far better time than the timorous horseman, perched like a monkey, on the back of a bucking cayuse, with nothing but six inches of rotten shale between himself and eternity.

Hints on the Camp Fire.

First of all, the site of the camp itself should be selected with the safety of the camp fire in mind. The vicinity of ground strewn with over-abundance of inflammable matter should be avoided, such as the depths of pine groves where dead matter has been collecting for many years, and a place should be scraped for the fire



A Bass Lake, Kippewa District.

minion, while along the branch line from Sudbury to the Soo, there is good hunting within a few miles of the track. Good as western Canada undoubtedly is, those whose moments of leisure permit them to hunt in the forests of these eastern parts of the Dominion, may rest assured they have every bit as good hunting as is to be found in the average west. Of course, if a man can arrange to fit out a pack train, and to bury himself far in the mountains, he will in time find himself in some El Dorado where the game is just waiting to be shot; but you have always got to find your way "across the range," for it is an axiom in the west that game is never found on the near side of any mountain you may happen to be camped upon. And sometimes just across the range means hard and dangerous work. The eastern man who can lay back against the centre bar

clear of roots and leaves. Care should also be taken that the earth upon which the fire is built is not filled with decayed and pulverized wood. Such a fireplace is among the most dangerous that can be chosen. Long after the excursionist has departed, leaving the fire extinguished, as he thought, such soil will hold many stray sparks still alive and ready to spring into a blaze with the coming of the first strong wind. But the most treacherous of all spots upon which to build a fire is ground which is full of the roots of trees, and especially pines. The camper should avoid such with great care. It would almost seem as though the roots themselves began feeling about after his departure to see if they could not find a stray spark somewhere, and finding one at last, set to with a will to tease it into a flame. I have seen where a bit of smouldering fire has followed the roots of trees for rods, beneath the surface of the soil, before it finally found sufficient fuel to burst into a flame. Such places are dangerous ones for fires. Keep clear of them at all odds.—Exchange.

HUNTING MATTERS

By C. JNO. ALLOWAY

DURING the past year a number of valuable additions and improvements have been made to the pack and other property of the Montreal Hunt Club. There are at present some eighty odd hounds in the pack, of the very choicest breeding and type. They are uniform in size and color, bearing a remarkable resemblance to each other. In conformation the entered hounds are well put together, deep chested, thick set, heavy boned specimens of the breed and are admirably adapted to the rough country over which they have to hunt. In color they are white, tan and black, the white and tan predominating. Since the close of the season of 1899 the entire pack has done remarkably well, and they are now entering upon their season's work, looking strong and healthy, and in the very pink of condition for this time of the year. Men, horses and hounds are now taking their daily exercise, preparatory to the cub hunting, which begins this month, and the regular hunting season will open on or about September the fifteenth. The membership has reached its limit and has a waiting list. The weather could not be better, and the frequent rains of the past month or more have made the ground simply perfect to begin a season's hunting. Taking everything into consideration this club, never in its history, started in for its initial work under more favorable auspices. Major George R. Hooper is master, and Wm. Nichols is huntsman, and this club is indeed fortunate in having a man with the knowledge and experience of the latter.

Canadian Hunt Club.

The members of the Canadian Hunt Club are enjoying their new quarters at St. Lambert far beyond their expectations. A number of the more active members have spent a good part of the summer at the club house, where they not only indulge in horseback-riding, but boating and fishing have been partaken of as well. The newly formed polo club has been a great attraction and a large number of the riding members are taking a deep interest in this popular game. About fifty polo ponies

were brought from Alberta by a number of enthusiastic members and the grounds of the club are now in daily use in learning this now and interesting game. The hounds of this club are getting their regular exercise and are looking well. Cub hunting has already commenced and regular hunting will be inaugurated early in September. A good season's sport is anticipated.

Hunt Steeplechases.

The annual Hunt steeplechases, under the auspices of the Montreal Hunt Club, are to be held on October 4th and 6th, and good sport is looked for. The course over which these races are to take place has not yet been named, but for the sake of the success of this once popular autumn gathering, it is to be hoped the meeting will not be held at Bel-Air.

New Race Course.

Recent events have made it apparent that some radical changes must take place in the present conduct of racing if sport of a legitimate character is to be maintained in the immediate vicinity of Montreal. In securing the auxiliaries necessary to success, the primary consideration is, of course, proximity to the points from which the patrons are to be drawn. Unless the grounds are within easy access of the electric cars and the place can be reached by carriage in from twenty-five to thirty minutes, it can never be made either popular or successful.

Racing in many parts of the Dominion during the past ten or fifteen years, has undergone a serious change, and one which it cannot be said has raised its moral tone or standing. Montreal has attained the position of one of the most important cities on the continent and certainly, with a population of almost one-third of a million, is warranted in entering into large commercial and organized ventures. One of these should be the possession of a first-class Turf Club of its own. Such an organization has already been projected, and before any errors are made, such as in the past have been the cause of failure, the

Rod and Gun would like to suggest a few cardinal points which it would be wise for the promoters of the scheme to bear in mind. First, let the location be easy of access, and not more than five miles from the City Hall; second, let the Jockey Club secure a board of control composed of gentlemen who are residents, and who are of unquestioned repute and standing; third, pass the most stringent by-laws forbidding the admission of gamblers as members of the club; fourth, have a code of by-laws and rules similar to that adopted by the American Jockey Club, and most important of all, insist on these regulations being lived up to in every particular; fifth, give two good meetings a year, not to exceed five days each, and a steeplechase meeting, of three days' length, early in October. The citizens of Montreal and its environments are a sport-loving public, and are willing to give enthusiastic support to what is legitimate and properly conducted. If the opportunity is given them, but to secure cordial patronage, the sport must be presented to them in a form that commends itself to favorable consideration.

High-Priced Youngsters.

The July sales of thoroughbreds at Newmarket were in part sensational. Mr. Foxhall Keene paid \$14,000 for Sandfly, by Isonomy, out of Sandiway, with a bay colt by her side by Persimmon, and we assume that it will not be long before mare and foal will graze in the blue grass pastures of Kentucky. Nine colts and three fillies from the paddocks of the late Duke of Westminster sold for \$216,500, an average of \$18,040. This is extraordinary. For the bay filly by Persimmon, out of Ornament, Mr. R. Sievier paid \$50,000, and the present Duke of Westminster paid \$45,000 for the bay colt by Orme, out of Kissing Cup. The young Duke also purchased the brother of Flying Fox for \$28,500. One thing is certain, the breeder who produces what by actual test is the best is sure of his reward.

The Test Handicap for three-year-olds and upward, one mile, was a feature at Brighton Beach on Tuesday, July 17th. Voter was the favorite, and he took up 122 pounds, and won with Spencer in the saddle in 1.38, which is record breaking time on a circular course. At Washington Park, Chicago, July 21st, the chestnut horse Orimar ran a mile in 1.38, equalling that of Voter as noted above.

GAME DESTROYERS

By Bob White

From a sportsman's standpoint anything that tends to the destruction of game animals or birds is bad, and should be put down with a firm hand. The hawk and crow are the chief offenders in this respect, and properly, we think, come in for a good round measure of cursing from those who have observed their merciless warfare on the defenceless game bird. As between the hawk and crow, the latter seems to be far the more destructive, and an agitation is being made in some quarters to place a bounty on the head of the black rascal. The reasons for destruction of the crow, as summed up from the opinions of various correspondents on the subject, may be given as follows: First, because it is a well known fact that they destroy great quantities of game and poultry, second, that he will hunt all day and every day for the quail or prairie chicken's nest, and when he finds it will destroy every egg in it; third, because they carry germs of hog cholera and other contagious diseases from one herd to another; fourth, because in winter they consume great quantities of grain from cribs, etc.; fifth, because a bounty on his head would enable the farmer to get some remuneration for his efforts in getting rid of the pest.

It is said that one of these game destroying birds will get away, on an average, with one game bird, such as the quail, in a day. One can readily understand what an enormous drain on the game there must be in satisfying the wants of these tireless hunters.

Another culprit in the matter of game destruction that comes in for his proper share of the general condemnation, is the domestic cat. It is a favorite method of getting rid of an unwelcome litter, by bagging them up, driving a few miles, into the country and there depositing the precious lot. These cats must find a living, and they naturally do so by preying on the game birds and animals in the neighborhood. Many a nesting quail, grouse or prairie chicken, no doubt, falls a victim to the rapacity of these semi-savage animals.

The wonderful fecundity of the cotton tail rabbit, no doubt, fills a useful part in the economy of nature by helping to satisfy the wants of these birds and animals, but it only partially does so. It is said that hawks and crows destroy more game than all the hunters combined, and we can easily believe it. The sportsman in turn can do a great deal to keep nature's account properly balanced by taking every opportunity to bring to earth these enemies of the game, which we all desire to protect.

FORESTRY

"Rod and Gun" is the official organ of the Canadian Forestry Association. The Editor will welcome contributions on topics relating to Forestry.

Editor—E. Stewart, Chief Inspector of Forestry for the Dominion and Secretary Canadian Forestry Association, Ottawa, Ont. Sub-Editor—R. H. Campbell, Treasurer and Asst. Secretary Canadian Forestry Association, Ottawa, Ont.

IN undertaking the editorial work for the Forestry Association the editors wish to point out the necessity for a hearty co-operation by all the members of the Association, if it is to prove a success. While an effort will be made to lay before the readers of this department the principles of the systems of forestry upon the Continent of Europe and elsewhere, the Forestry Association was not formed for the purpose of urging the adoption of any inflexible system "made in Germany," but the desire is to study the result of experiments and investigation made in Canada in the light of the experience of those countries which have thoroughly organized their forests in order that the most suitable and economical methods may be ascertained and adopted. The whole of this branch of the Association's work will fail if the editors merely sit in their chairs and give academic utterances on the principles of forestry, and it is therefore of vital importance that the members of the Association should contribute any information in their possession which will assist in throwing light on the problems and conditions of forestry in Canada. Arrangements have already been made for a number of articles which we are satisfied will be both interesting and useful, but the space at our disposal is so limited, compared with the large field to be covered, and the work is yet scarcely organized, so that we must ask the members of the Forestry Association not only to judge our efforts kindly for the present, but to give us such assistance as their experience may suggest.

There are many problems which the Association may help in working out. The proper system of management to be adopted for our Canadian forests, which will necessarily bring in its train a study of the habits and the growth of the different species of trees and also the market conditions, will demand attention. The causes

and prevention of fires, and the loss occasioned by them, the injury done by insects, by snow, by wind and by other agencies should all be systematically investigated.

We should have the opinions of the members of the Association on the proper locations for forest reservations, and the effects of the preservation of the woods on the water supply and hydrographic conditions generally.

There are many who have had experience in planting and caring for trees both in the cities and upon farm lands, particularly in the West, and a statement of the facts and conclusions reached would be very helpful to others.

There are many less prominent questions, such as grazing in the forest, the effect of the work of the beaver, as suggested by Mr. Pearce in his address before the annual meeting, the influence on the fisheries and on wild animals, etc., on all of which we are sure that our readers could give useful information.

Possibly much of the responsibility for working out these problems should be assumed by the different governments, but that does not preclude the desirability of having the result of private experiments or experiences recorded, and one part of the work of the Forestry Association should be to call the attention of the governments to the work which the experience of its members would suggest should be undertaken, and to bring together the scattered information on matters relating to forestry in such a way as to give a clear and comprehensive view of the whole situation.

The members of the Canadian Forestry Association will be very much pleased to hear that the president, Sir Henri Joly de Lotbiniere, has been honored with the appointment of Lieutenant-Governor of British Columbia. Our best wishes will certainly go with the new Lieutenant-Governor, and we trust that he may find the term of his occupancy of the gubernatorial seat a pleasant one. It is to be regretted that we should lose our president from the Capital at such an important time in the history of the Association, as he has shown

such a deep interest in its success, and has always used his large knowledge and influence in its behalf. We are confident, however, that he will still take an active interest in the Association (indeed we already have evidence of that fact) and that his residence at the Coast will result in bringing the people of British Columbia more into touch with the work of the Association.

Dr. William Saunders, director of the Central Experimental Farm, and one of the members of the Executive Committee of the Forestry Association, has left for the Old Country, where he will attend the meeting of the British Association for the Advancement of Science, and also visit some of the Experimental Stations in order to compare their methods with those pursued in this country.

We are happy to be able to state that there are now three life members of the Canadian Forestry Association, His Honor Sir Henry Joly de Lotbiniere, Lieutenant-Governor of British Columbia; Dr. A. H. McKay, Superintendent of Education for Nova Scotia; and Mr. Hiram Robinson, of Ottawa. These three gentlemen are representative of the different interests to which the work of the Association should appeal. Sir Henri Joly de Lotbiniere has long been interested in the question of forest growth from a scientific standpoint. Dr. McKay represents the educationists, to whom the question should be one of special interest, and who are in the best position for arousing the attention of the youth of the country to the subject. Mr. Hiram Robinson is the manager of the Hawkesbury Lumber Company and one of the leading lumbermen of Canada, and is, therefore, interested from a business and practical point of view.

The present Minister of the Interior, the Hon. Clifford Sifton, has taken a very deep interest in the work of the Canadian Forestry Association. He has already shown this by having the report of the first annual meeting of the Association published by his Department, in order to give the Association as good a start as possible, and he has also become a member. When submitting to the House of Commons recently the recommendation for an appropriation for the Forestry Bureau he was also kind enough to call attention to the report of the Association, and to recommend it to the perusal of the members of the House. He also expressed his opinion of the importance of the work in the following words: "My opinion is that nothing could be done that would be of greater import-

ance to the welfare of Canada than to care for our forests. This is particularly vital in Manitoba and the Northwest Territories."

We take the following extract from the annual report of the Deputy Minister of the Interior, Mr. Jas. A. Smart:

"As to the propagation of trees and the encouragement of tree planting generally in Manitoba and the Northwest Territories, I may mention that during my recent visit to the Old Country and Europe, I found much to interest me in the beauty of the shrubbery and trees wherever I

ning through the farms or adjoining private grounds in town or country. There is no doubt that by the expenditure of a reasonable amount of money, the settled districts in Manitoba and the Northwest Territories could in the same way be greatly beautified through the planting of trees which, with proper attention, would soon bring about a perfect change in the general appearance of the country. It is, therefore, advisable that a certain sum should be made available for this purpose next year, or at least in the very near future.

The people of Manitoba and the Territories are fully alive to the importance of



The Camp, Lake Kippewa.

went. The comparison with Canada, and especially Western Canada, was not favorable, particularly as regards the interest or lack of interest, taken by the settlers in tree planting. While travelling in Belgium, I learned that a large portion of the trees, which have now assumed immense size and beauty, were of quite recent planting. In twenty or twenty-five years, by proper cultivation and trimming, their growth has been remarkable, and they are now very shapely. Before that time it would appear that in many of the districts visited there were no trees to be seen at all, but since then the question of arboriculture has received considerable attention, and it has now passed beyond the experimental stage. This was evidenced by large sections of country covered with a splendid growth of beautiful trees, and by the artistically shaped hedges on each side of the main highways and along roads run-

this work, and from the number of inquiries which have been received at the Department of late on the subject, there is no doubt that they are prepared to take a very great interest in it. In addition to beautifying the country and practically changing its appearance, as has been done in the case of Belgium, there are other reasons why the Government should interest itself in this important matter. There is the protection to buildings, to animals and crops, as well as the advantage to the prairie districts of producing a new supply of fuel for the use of the settlers. It is a well known fact that where trees have been successfully cultivated, such conditions prevail as will attract moisture, and on the whole there is every reason to believe that the value of farm lands will be greatly enhanced by co-operation with the Government on the part of farmers in the planting of trees and shrub-

bery in their various localities. I think, therefore, that it would be in the public interest to have a certain amount appropriated to cover the salary of a number of officers to look after this particular work. These persons could be employed the whole year round, during the spring, summer and fall in visiting settlers and directing them as to the planting and proper care of trees, and in the winter in delivering lectures on tree culture in all the settled districts. These men should, of course, be well versed in the subject, and of first class experience, as it is important the work should be done thoroughly and expeditiously from the start, so that the public may know at once that the Government intends to take a deep interest in this special branch of agriculture."

Mr. E. Stewart, Inspector of Timber and Forestry, has just returned to Manitoba after a trip through the Dauphin and Swan River country, making an inspection of the timber. He states that in the Swan River Valley there is some of the finest spruce that he has ever seen, and he has gathered considerable information which will be very useful in the arrangement of the work of the Forestry Bureau. In the most north-westerly part of the Province of Manitoba there has been such an abundance of rain that the swamps are filled with water, and when crossing one of the streams the water was so high that the party were unfortunate enough to have everything carried away, and only rescued their goods with considerable difficulty. It is reported that all through the wooded parts of the Northwest Territories the swamps are so filled with water that there is very little danger of forest fires during the present season. As it was thought that there would be much more danger of fire in Manitoba, where the season had been a much drier one, Mr. Stewart considered it better to return there and arrange for work in the Riding Mountain district. The neighboring district of Dauphin was visited by a disastrous fire during last fall, a large area of good timber being destroyed, and a number of the settlers in that vicinity were burnt out, rendering necessary the giving of assistance to them by the Local Government, and fires were reported at Riding Mountain this spring. Some of the English-speaking settlers in the district were inclined to blame the Galicians for the starting of these fires, but an investigation was made by the Dominion Government which brought out the opinion that the Galicians were no more to blame than other settlers, and

that in some cases the fires were probably started by camping or hunting parties, and the persons who made the accusations against the Galicians have now practically withdrawn them. A number of notices giving a synopsis of the Fire Act of Manitoba have been printed in the different languages and posted in conspicuous places near timber in the Province, so that the settlers of all nationalities may be warned to take the necessary care to prevent the starting of fires.

Practical Forestry in the Adirondacks.

The United States Division of Forestry have made an offer of assistance in the management of trees not only to farmers and settlers, as mentioned in our last issue, but also to owners of large tracts of timber, as a larger portion of the forests of the United States are in the hands of private parties than is the case in Canada. Indeed the private forest lands exceed in area those of the States and the Federal Government combined. Most of such lands also are in hilly or mountainous country, and the preservation is important both for the timber and water supplies. These lands are, of course, held by the owners largely for the returns they yield, and the forest crop has been usually harvested with a view to the present profits, while the preservation or restoration of the trees is overlooked as something either impossible or unprofitable. The methods followed have often resulted in serious and needless injury to the timber and, as this is considered a matter not only of private but of public concern, the Division of Forestry made the offer referred to with the object of showing by concrete examples that improved methods of lumbering will pay.

Two applications for the management of spruce lands in the Adirondacks which were made in response to this offer have been for a year or two under the charge of the officers of the Division of Forestry, and Mr. Henry S. Graves, the Superintendent of Working Plans, gives in a bulletin entitled "Practical Forestry in the Adirondacks" the result of the plans adopted so far as they have been carried into execution. The two tracts covered by these applications were Nahsane Park, the property of Dr. H. S. Webb, comprising 40,000 acres, and 68,000 acres owned by Hon. W. C. Whitney, commonly called the Whitney Preserve.

The systems of forestry followed upon the Continent, and especially in Germany, are very thoroughly developed, but they have

been gradually evolved, and it is only by the growth of long years that they have reached the state of perfection in which they now are. While undoubtedly these methods would be the best if they could be applied to the management of forests everywhere, they are not adapted to the present development of forestry in America, and therefore, Mr. Graves urges an American system of forestry which will be suited to the present and which will, though necessarily rough and imperfect, be a step forward in the direction of the proper management of the forests.

A number of the cardinal principles of forest management under the continental system are therefore laid aside.

In the first place the maintenance of a sustained annual yield is not undertaken, as it is not considered necessary that the same return should be received from the property every year, and moreover the tracts under consideration were already stocked with timber which was old and on the decline, and which it would be much better to remove in order to make room for a new and vigorous stock. It was calculated that if the whole area were denuded the same yield could be obtained again in thirty-six years, whereas if only one thirty-sixth were cut each year the result would be only an average of eighteen years growth on the whole tract at the end of that period. The larger cutting would also reduce the expenditure for taxes and for logging.

The removal of dead and unsound timber is advocated in well organized systems of forestry, in order that the wood may be used before decay, and to prevent the breeding of insects. The dead trees could not, however, be used in the present instance, and the expense of removal would not be justified, while the unsound trees might still be useful in helping to shade the ground and to distribute seed.

Thinnings and improvement cuttings have not been undertaken. The thinning of the young spruce might be advantageous where the wood taken out could be disposed of profitably, but not otherwise, and the removal of the hardwoods which were overshadowing the spruce too closely was found to cost at the rate of about twenty-five cents per acre, which was considered too high a figure to make its adoption profitable.

The building of permanent roads, the planting of the denuded areas, and the cutting of fire lines, all of which are important parts of forest management in Europe, could not be introduced, as the expense involved would be in too great disproportion to any benefit derived from them.

The Whitney Preserve, to which we will refer more particularly, is a tract of approximately 68,000 acres, in Hamilton County, State of New York. The tract is characterized by a large number of lakes and small ponds. In general the land is a high rolling plateau, broken by a few high mountains, and a number of long, rather low and broad ridges, which are interspersed with numerous ponds and swamps. The prevailing rock is gneiss. The characteristic tree is the red spruce.

The land is considered in four divisions; the swamp land comprising twenty per cent.; the spruce flats, level and rolling lands bordering on lakes, streams and swamps, about thirty per cent.; the hardwood lands, being elevated benches and moderate slopes, forty per cent.; spruce slopes, being steep slopes with thin, stony soil, ten per cent. Spruce reaches its best development in the spruce flats or slopes, and in favorable localities and crowded forests forms a long, clear, full bole and a short crown. The average height of the trees in such situations is 90 feet, and the diameter 24 to 26 inches. On low swampy ground the crown is long and the tree comparatively short. The average for the crown in all situations is about 40 feet, and the average clear length from 25 to 30 feet, the average length of the marketable log being found to be 46 feet. The root system is flat and superficial, and the tree in consequence is able to thrive on shallow soil. While the character of the tree varies according to the situation, it is not fastidious, but will occupy all situations and soils. The spruce is also able to grow in the shadow of other trees, and retain its vitality and, even though suppressed for many years, it will spring up and grow vigorously when an opportunity is given.

A certain amount of spruce seed is produced annually, but the trees bear much more heavily in some years than in others. The seed usually begins to ripen in October, but the cones cling to the trees till late in the season. The seed is light and winged, and is carried by the wind to great distances. Trees have been known to produce seed at as early an age as fifteen years when growing in the open, but seed-bearing may be very much delayed by overtopping. The spruce continues to bear seed to a great age.

The system of cutting recommended for this tract is to remove the spruce of ten inches and over in diameter at three feet from the ground except certain trees which are needed to seed up the openings made in lumbering. Successive crops could be obtained from the ground at shorter inter-

vals if twelve instead of ten inches were made the limit to cut, but the owners preferred to wait a longer time for a second cutting in order to obtain a larger immediate profit.

In the ordinary process of lumbering considerable loss was occasioned by leaving needlessly high stumps and large tops, by leaving skids in the woods, by using valuable timber in leveling roads, and by the destruction of the small growth in felling, skidding and hauling. Stumps had generally been cut at from thirty inches to three feet from the ground, but by cutting at eighteen inches it was calculated that there

keeping about fifty feet apart, and marking every tree between them. The inside man followed the previous line of marks and the others were guided by him. They can mark on an average about forty or sixty acres per day. Marking was begun on the Whitney Preserve on the 15th October, 1898, and within ten days the logging gangs were cutting the marked trees.

The area lumbered over in 1898 was 5,452 acres. As near as could be estimated approximately 1,652 acres had been cut over before the marking began. The total area on which the timber was marked was about 4,000 acres, and there were fully



The Portage, Lake Kippewa.

would be an increase of two per cent. in the value. The use of more of the tops was found to make an increase of 6.3 per cent., while the cutting of the branches to a greater height removed much of the danger from fire. Careful work in felling and the dragging of the logs to the skidway also resulted in the preservation of the young growth.

When the time for cutting arrived the forester with his assistants marked with a special cut the stump of each tree that was to be removed. All trees over ten inches in diameter which were not required for seed were marked, and also any that could profitably be removed and which would not likely be of value at the second cutting. The marks on the stumps showed afterwards whether only the proper trees had been cut. The most rapid work was done by a crew of three men. They moved through the wood abreast,

200 acres marked which were not lumbered. The total cost of marking was \$598, or about 15 cents per acre. The total number of trees over ten inches in diameter left for seed was 4,599, or something over one tree per acre. It is estimated that these trees averaged 1.4 standard each, making the yield for the entire 4,599 trees 1,130 standards. There were marked for removal altogether 282 trees under ten inches in diameter. These trees averaged .22 standards each, or the entire 282 trees 62 standards.

The number of pieces of spruce cut on the area mentioned was 266,739, or an average of 48.9 per acre, making 79,415.00 standards or 14.6 per acre. There were also cut 20,506 pieces of pine making 19,965.79 standards.

We are not in possession of the results of the work for the season of 1899, but enough has been given to show the nature

of the experiment and the very practical way in which the management of the forests is being approached by the Forestry Division of the United States.

The United States Division of Forestry is rejoicing over an increase of the appropriation for the work of the division to \$80,000, being double that which was previously granted, but their joy is somewhat dampened by the feeling that despite this increase, the amount at the disposal of the division is very far from being as large as would be required if all the proposed and really necessary lines of work were taken up. What would they think, however, if they had to get along on an appropriation of \$10,000, which is the amount allowed the Canadian Forestry Bureau? That is certainly small enough to attempt to do the work of the Dominion, but if the good example of the American Division can be followed and the amount increased regularly by one hundred per cent. until it becomes more adequate to the requirements, it may be possible to do the work much more effectively in a few years. The Canadian Forestry Association should certainly use its influence to have the amount made more nearly adequate for the very large area which has to be covered.

A special summer meeting of the American Forestry Association was held in New York on 25th and 26th June in connection with the meeting of the American Association for the Advancement of Science. More than twenty-five papers were read reviewing the work of the Federal Government, and that of eight or ten of the different States. Papers were read by Dr. B. E. Fernow, Mr. Gifford Pinchot, Mr. H. S. Graves, and a number of other of the leading men interested in forestry in the United States. Among the papers was one entitled "Notes on Forestry in Canada," by Mr. E. Stewart, Chief Inspector of Timber and Forestry in the Dominion.

The Hon. James Wilson, Secretary of Agriculture, presided at the first day's session, and in his address urged the importance of forest protection, and the reservation of the lands suitable for timber growth. "The axeman will soon see through our woods," he said, "and two decades or less will exhaust our primitive forest of building woods." He also pointed out the effect of the denudation of the country in the shortness of the cotton crop last year, and of the wheat crop for this year.

A committee was appointed to co-operate with the Federation of Women's Clubs

in the effort to obtain a national park in Minnesota, and a resolution was passed in favor of the reservation of 25,000 acres of Redwood lands (*Sequola sempervirens*) in the Santa Cruz Mountains, forty miles south-east of San Francisco. The proposed Appalachian Park was also brought to the attention of the Association by Mr. J. A. Holmes. A proposed bill for the protection of forests from fire was submitted, but was referred back to the committee for further report.

A strong effort is being put forth to have a Forest Park Reservation in Minnesota, and as it is in the vicinity of the source of "The Father of Waters," the great Mississippi, it is one of special interest to every American citizen. One interesting feature in connection with the agitation is the active participation of the Federation of Women's Clubs.

We would be glad to have our own National Council of Women take an interest in the forest needs of Canada.

The proposed park in the Appalachians is also receiving special attention at the present time, and an appropriation of \$5,000 was obtained at the last session of Congress for the purpose of the examination of the district, with a view to the selection of the most suitable location. A forest park in that part of North Carolina would be a most interesting one, as botanists are agreed that the richness and variety of its forest and floral growth are unequalled elsewhere in America. Here the forests of New England meet those of the extreme Southern States; so that, ascending from the tops of the gorges to the tops of the higher mountains one sees much the same variety of plants as he would in travelling from Alabama to Canada. In the cool moist coves of this mountain region the hardwood forest trees reach their maximum development. Oaks from five feet in diameter, chestnuts still larger, and tulip poplars from six to ten feet in diameter are associated with beeches, birches, lindens, maples and numerous other species which have found conditions most favorable to their growth. Here they have lived together for centuries without man's interference. In the gorges of deeper valleys one finds the trees and shrubs which are common over the Piedmont plains, which lie to the east, south and west. Ascending the mountains along the lower slopes one passes through the splendid growth of maples, oaks and poplars; above these come the beeches, birches, hemlocks and their associates; but higher still one passes through groves of bal-

sams and fir trees. At the tops of the higher mountains even these last have generally disappeared, giving place to grass and the rose-colored Rhododendron. Interspersed among these trees in the coves, on the crags, and up the mountain slopes, one finds the Rhododendron, the Kalnias, and hundreds of other beautiful shrubs and a rich variety of delicate flowering plants. Here are found the highest and most massive of the Appalachian Mountains, nearly half a hundred peaks rising more than six thousand feet in height; and the deepest gorges resulting in the most varied and beautiful scenery. This region is unsurpassed in healthfulness; in it also are the head waters of streams which have to do with the manufacturing enterprises and with navigation in the two Virginias, the two Carolinas, Georgia, Alabama, Tennessee, Kentucky and Ohio.

The promoters are working up the sentiment in favor of this park with characteristic American vigor. They have raised \$1,465 for the purpose of advertising the movement, and have sent out 191,200 pieces of printed matter, besides numerous letters. The press have also given strong support.

We must apologize for the way in which some of the matter for last month's issue was arranged. We are assured, however, that it will not occur again.

We are informed that the fire notices posted by the Dominion officials in British Columbia are having a very good effect.

The only raft of square timber which has passed down the Ottawa River this season, was reported as having passed Calumet some days ago. This is a great change from the days when almost throughout the whole summer a large part of the river below the Parliament Buildings would be covered with rafts of square timber.

The logs which are brought down from the lumbering camps in the Gatineau district are not infrequently caught in a large jam at the Cascades, a point on the Gatineau River, about 14 miles above Ottawa. Just a few weeks ago there was a large jam at that point, covering perhaps an area of 100 acres, and being in places about 20 feet in thickness. In this jam there were probably over a quarter million of good logs, which would represent an immense value. The breaking of a jam of this kind has always been one of the most exciting and dangerous parts of the lumberman's work, but in this case a new method of getting the logs free was undertaken. On a large raft or crib work a steam engine was set up and attached to this was a drum upon which was a wire cable with a hook on the end. The raft was towed up to the jam and tied to a pier in such a way that if the jam should suddenly break and the logs come rushing down the river, it would be swept aside and no harm would result. The hook on the cable was attached to the logs on the top of the jam, and they were pulled out one by one without strain or danger. The operation is very rapid, and with good work one log a second can be sent down stream.

AT THE KENNELS

Conducted by D. Taylor.

THE bench show of dogs in connection with Toronto Industrial Exhibition will be held September 3rd to 6th inclusive.

The judges are: For fox, Irish and Scotch terriers, Mr. James Lindsay, Montreal, who made such a successful debut as a judge at the spring show here. Mr. Lindsay is known to his friends as a reliable man on terriers, and we have no doubt fanciers of these breeds, both in Canada and the United States, will meet him with lots of entries to adjudicate upon; for great Danes, Boston terriers and dachshunds, G. Muss-Arnolt, Tuckahoe, N.Y.; for foxhounds, pointers, setters, Chesapeake Bay dogs and beagles, Major J. M. Taylor, Rutherford, N.Y. The all-round judge is Chas. H. Mason, of New York, who will take all other breeds. The entry fee in each class is only \$2, and the limit is fixed for the 15th August. The classification is somewhat increased over that of last year, and should ensure good competition all round. Mastiffs have two open classes, bloodhounds, Newfoundlands and deerhounds one class, the prizes being \$10, \$5 and diploma. St. Bernards and Great Danes have the usual classification, puppies being provided for in the first-named breed, with prizes of \$5, \$3 and diploma. Novice have \$7 and diploma, limit and open same prizes as for mastiffs, Russian wolfhounds are provided with limit and open class, greyhounds, novice, limit and open classes, with prizes of \$7, \$3 and diploma in novice, and \$10, \$5 and diploma in limit and open. The balance of the classification provides \$7, \$3 and diploma in novice and \$5, \$3 and diploma in limit and open classes. Canadian classes are provided for with \$5 to first, \$3 to second, diploma to third. The Industrial Association offers a medal for the best St. Bernards, foxhound, pointer or setter, best spaniel dog, best spaniel bitch, best collie dog, best collie bitch, best bulldog, best bull terrier, best beagle, best dachshund, best Irish terrier, best fox terrier dog and best fox terrier bitch. Mrs. Jos. E. Seagam offers a cup for the best kennel of foxhounds. The Canadian Collie Club offers medals to the best dog and bitch (open to members only), and there are a great many

other valuable specials, the fox terrier classes being especially well provided for. Mr. W. P. Fraser, Toronto, Ont., the courteous secretary and superintendent, is always ready to respond to enquiries.

A valuable consignment of Scottish terriers arrived here on the steamship *Laconia*, Capt. Neil, from Glasgow, the end of last month. They were purchased and imported by Messrs. Motherwell & Roy, and consist of two dogs and one bitch, each one of them a crackerjack, and of the very best blood in Scotland, being descended from winners and champions of winners. Notwithstanding their long journey they were as lively as possible, and looked fit to win at once. Quite a lot of fanciers who had got an inkling of their arrival, were on hand to see them taken from the vessel, and their verdict was that they were the best of the breed ever brought into Canada. The consignment comprises: Wishaw General (Kalmacrow Prince ex Zelba), whelped September, 1899; breeder, R. Tait, Wishaw. Midlothian Chief (Prince Alexander ex Heather Bee), whelped June, 1898; breeder, R. Marshall, owner of one of the best kennels in Scotland, and an accepted authority on the breed. Snap Shet (Melville Boxer ex Romany Romp), whelped October, 1899; breeder, R. Marshall. They will make their first public appearance at Toronto next month.

Mr. Frank Riley, the well-known cattle shipper, recently imported a very fine Irish terrier from the "Ould Sod."

At the great annual show of the Ladies' Kennel Association held in the Royal Botanic Gardens, Regent's Park, London, Mr. G. M. Carmochan, of New York, judged the fox terrier classes.

Mr. Fred. T. Miller, of Trenton, Ont., has lately purchased from Mr. S. Britcher, the well-known bull terrier breeder of this city, the young bull terrier dog Newmarket Baron (ch. Little Flyer ex Newmarket Syren), also a good young bitch from Warren Lewis, of Ypsilanti, Mich. Mr. Miller's St. Bernard bitch, Queen Regent, winner of several firsts at Toronto spring show and second at Montreal, whelped a

few days since a litter of 13, 12 of which are alive at present time and doing nicely.

To satisfy the questionable taste of Parisian ladies for dwarfed dogs, there are about fifty professional "dog dwarfers" in that city, who make an extremely good living at the business. In the growing stage of puppyhood the dogs are brought up on an alcoholic diet, which has the effect of stunting them.

Mr. Jos. A. Laurin's imported Irish terrier, "Imperial Totterina," by Champion Jackanapes, out of "Champion Milton Dro-keen," has returned from New York, where she was on a visit to Oscar W. Dorner's grand young imported dog, "Milton Muddler," by Champion Breda Muddler.

"Charles" Lyndon, the trusted kennel manager of Mr. Geo. H. Gooderham, Toronto, has been visiting England on business, and has made a few sound purchases in smooth fox terriers, which will, no doubt, add to the prestige of Norfolk Kennels, if that were possible.

Mr. Crocker, of New York, who recently purchased the famous bulldog Rodney Stone, for \$5,000, has placed him at stud, the fee being \$150. The American Stock-keeper calls this fee prohibitive, but when one takes cost into consideration, and the fact that he is admittedly the best bulldog in the world, the fee cannot be called exorbitant.

The Ladies' Kennel Association (Eng.) show was an immense success. Notwithstanding the fact that over 300 entries were sent back owing to late arrival, there were a larger number of dogs benched than ever before, and the show was visited by the wealth and fashion of London. In speaking of the function an English contemporary says: "The awarding of the Dholpur Cup (500 guineas trophy) was a delicate matter. It was for the best Borzoi in the show. Mr. Crawford Hick judged this section, which was a pretty good one, and made Captain Borman's young dog, Shylock, the best Borzoi. Ordinarily this dog would by virtue of this award be entitled to the cup. The executive, however, ordained that it should be awarded by three experts, Mr. Hick himself, Mr. Theo. Marples, and Mr. George Raper. Under this arrangement it was, of course, necessary for the whole of the dogs to be rejudged, and for this purpose they were all brought into the ring. The collection were ultimately reduced to two candidates for the coveted honor. These were Shylock and Ch. Alex, who belongs to H.

R.H. the Princess of Wales, and who got third only in his class. Mr. Raper went carefully over the two dogs, making Alex. the best of the two, and giving Mr. Hick his reasons for it on all points. The latter, however, held on to his original award. This meant that Mr. Marples found himself in the position of umpire. This gentleman now carefully made comparisons between the two animals, amidst the almost breathless silence of the spectators, amongst whom interest had been worked up to "concert pitch," which burst out in vociferous applause when he gave his fiat in favor of the Royal competitor.

"Whilst this almost dramatic scene was proceeding, Her Royal Highness arrived at the Show and made her way to the dog tent, quite oblivious of what had been going on. She was conducted to the ring by Mrs. Stennard Robinson, when her victorious canine was brought before her by her faithful kennel manager, Brunston. The presence of Her Royal Highness, who was accompanied by the Countess of Iddesleigh, and who looked as sweet and charming as ever, was the signal for an ovation. In the ring Mrs. A. C. Wingrove, who represents the Maharane of Dholpur, the donor of the cup, stepped forward, and presented Her Royal Highness, who shook hands with Lady Reid and an Indian noblewoman, gorgeously bedecked in native costume, who, with the Gackwar of Barda, a notable Indian Prince, were at the ring side, and excited considerable curiosity. Our future Queen, who subsequently made a tour of the tents, was of course, "the observed of all observers," Her Royal Highness's unexpected presence being regarded as one more indication of the warm interest she takes in the Ladies' Kennel Association and its show, and which more than atoned for the disappointment felt at the inability of H.R.H. the Duchess of Connaught, the president, to be present to distribute the chief trophies to the successful competitors."

In a late issue of *Our Dogs*, Manchester, Eng., we find the following: Sporting challenges seem to be the order of the day, at least in English kennel circles. The latest in this line is a challenge made by our distinguished American visitor, Mr. G. M. Carnochan—who is making many friends in the old country—and which has been accepted by Mr. Geo. Raper for one. Mr. Carnochan informs us that next summer he purposes bringing a team of wire-hairs to England, of his own breeding, and pitting them against the cracks of the "mither country." It was a bold bit of fancier diplomacy, we thought, when Holgate decided

to take over a variety team to Dollarland to compete against the Yanks. We in England profess to be stronger in most varieties than our cousins across the water, who draw most of their supplies from us. Fox-terriers are a variety in which there is no gainsaying our ascendancy, which accentuates the pluck displayed by our New York friend in essaying to try conclusions with Englishmen on their native heath.

But Mr. Carnochan's challenge seals his daring. He challenges any English breeder to show next year (1901) in England at the first important show held under Kennel Club rules in the early summer (the appointed judge at such show to be the judge to decide the merits of the dogs), a wire-haired puppy bred by himself in 1900, against any wire-haired puppy bred by any English breeder in 1900, for £25 a side.

The challenge, which was made at the Boston Show and promptly accepted by Mr. Raper, we are authorized by Mr. Carnochan to state, is open to any other breeder in this country who may feel disposed to accept it. All we can say is that it is a big order, and if Britishers are made of the stuff we think they are, and which some Americans think they "aren't," we fancy Mr. Carnochan's challenge will be accepted in several quarters. It is one kennel against "All England!" Even if nobody besides our Winocbank friend has the temerity to take Mr. Carnochan on, the match will be very interesting—a kennel yacht race on a small scale.

Mr. Carnochan recently paid the famous "Barrowby" kennels a visit, and was so smitten with the charms of that splendid little bitch, Barrowby Glisten, the dam of Ch. Ridgewood Tiny, Ridgewood Marion, and Ridgewood Imperialist, that he purchased her for £100. She is again in whelp to Donatello, who sired the progeny above mentioned. Mr. Carnochan at the same time purchased a bitch puppy by Sundial ex Glisten for another century. Mr. Musson considers this puppy to be the best he ever bred, in which case she should not be dear at the price paid.

Mr. Carnochan has paid very high prices in his day for the breed he is so partial to, notably Ch. Go Bang and Ch. Claude Duval. It may not be generally known that the popular sportsman is honorary vice-president of the Montreal Canine Association.]

Rheumatism is an ailment to which sporting dogs are very liable, presumably because they are subject to more frequent exposure to cold, wet weather than any other dogs—often being compelled to work, whatever the state of the weather may be,

and then, being brought home, are allowed to go to kennel without being groomed at all, and the kennel very often being cold and miserable. Rheumatism, when it once sets in, is almost certain to become chronic unless the dog is very carefully looked after. The best treatment consists in giving occasional doses of Epsom salts (a small teaspoonful for a dog of 25 lbs. to 30 lbs. weight)—sufficiently often to keep the bowels regular. In addition to this a very small dose of iodide of potassium may be given dissolved in water—not more than half a grain in each dose for a dog of the same size. This is best made up in the form of a mixture by any good chemist, who will make up a 4 oz. or 6 oz. bottle and give directions as to what proportion of it contains the necessary half grain. It is also essential that some useful liniment should be applied. There are plenty of good embrocations and liniments on the market, any of which can be used for the purpose; or equal parts of camphorated oil and turpentine may be mixed together, and will produce a very useful embrocation for rheumatic dogs. The liniment should be applied as often as possible to the parts most affected, and the iodide of potassium mixture may be given twice a day, or in acute cases three times. Salicylate of soda is also recommended as a good thing for rheumatic affections. A dose of this would be about three grains for a 25 lb. to 30 lb. dog. It can be made up into a mixture in exactly the same way.—Our Dogs.

Breaking and Handling of Dogs.

Mr. H. B. Tallman, of Providence, R.I., gives some very valuable hints as to the handling and breaking of dogs, in a series of articles written for *Turf, Field and Farm*, from which we make the following extracts:

A dog may be broken to follow at heel at any time after he has been broken to come when called. If he is of sulky disposition it may be found easier if delayed until he has learned to be more cheerful under restraint. Although it is a simple process to teach him to follow, it is sometimes more difficult at first to teach him to go on again. He should have become accustomed during his lessons to the same words and gestures of praise and encouragement, and to the same manner of making him understand after he has done well that his lessons are over for the time, and he will then be more apt to forget his sulkiness whenever they are used. I am not in favor of the general use of the spike collar, and cannot see that it has any advantages over the whip. It is all right in its place, if used with moderation, but it

is a harsh instrument, and in handling a very obstinate dog the temptation is strong at times to use it with unnecessary severity, and until experience in breaking dogs has fitted a man to use it with judgment, it would better be dispensed with. As the whip is used for the correction of faults committed during the dog's work in the field, it will be better to use it instead of the spike collar during his yard breaking, to familiarize him with its use as an instrument of punishment and compliance. The spike collar, being allowed to remain upon him in readiness for use, keeps him thinking about and dreading it when it is desirable to encourage his cheerfulness.

In teaching him to follow at heel, use a lead of sufficient length to allow the dog to get a few steps away from you before he is checked. It should remain slack so long as he keeps in his proper place, and tightened only when the order "Heel" is given, or to hold him within reach of the whip. When he gets in advance of you or too far behind, order him to "Heel" and pull him into place while you continue to advance, at first without using the whip. If he persists in advancing too far, or in lagging behind, use the whip on his shoulders in the former case and on his hind parts in the latter. When he has learned to obey the order while on the lead, release him, and with a wave of the hand tell him to go on. After a short time call him to you and make him follow without using the lead, which will be easily done if he has been well broken to come when called. If he refuses to go on when so ordered, step lightly upon his hind feet while encouraging him with your voice and a forward motion of the hand. Do not be impatient or use the whip to force him away from you, as the whip should be used only when the dog cannot avoid it. Simply show him that he is at liberty to go if he wishes and that he need not take his place behind you unless ordered to do so. If this lesson can be given in company with a broken dog, the latter part will be more readily understood, as he will naturally follow the other dog when he is ordered on.

If it were desired to teach a boy a certain accomplishment, and if he were made to perform certain parts without understanding the application to the object of the lessons, he would naturally lack interest in his lessons, and only learn them because he felt obliged to. If the lessons were made as interesting as possible in the beginning by his understanding the object he would learn more quickly and be prouder of his knowledge when gained, and more cheerfully willing to exhibit what he had

learned. The intelligent dog, by learning first to hold, carry and deliver an article, and being praised and petted for doing it, through being made to understand the object, begins these lessons in retrieving by feeling proud to perform a simple action which procures him so much approval from his master. He will then in later lessons be more inclined to do what is required of him, quickly and cheerfully.

As the next step toward retrieving, teach him to take the roll from your hand. Hold it close to his lips and tell him to fetch it. If he turns his head away follow the movement so as to keep the roll in front of his lips and show him that he cannot avoid it by repeating the command "Fetch it." If he seems inclined, however, reluctantly, to take it into his mouth press the roll into his mouth as soon as he opens it a little, and speak encouragingly to him as though he had done it all himself. If he still refuses after being told a few times to fetch it, press the roll against his front teeth, and forcing his mouth open quickly place the roll in it and stepping back, make him deliver it as in former lessons. Continue this line of action until the dog will himself take the roll from your hand and hold it until it is taken from him. Next teach him to step forward and take it by holding it farther away from him and motioning toward you with a snap of the finger, while at the same time telling him to fetch. He should have learned the meaning of this gesture in former lessons, and although he may not obey it promptly under these circumstances, it will help to teach him your meaning. Use the check cord if necessary to make him come forward, and if he does not respond readily to the cord, use the whip on his rump to make him do so, while holding him by the collar to prevent his jumping away from you, and when necessary, guide his head toward the roll by grasping his muzzle. As the lesson advances, lower the roll toward the ground until he will lower his head to take it from your hand when held so as to just clear the ground. As he starts to take it, rather help him to adjust it in his mouth than to move it away from him.

Making him carry the roll three or four steps every time before taking it from him will serve to keep in his mind the object of his lessons and make a little variety in them. It will make no difference whether he sits, stands or crouches while you are trying to make him take the roll from your hand so long as his attention is kept upon it, and he can be made to come forward when necessary. Allow him plenty of time to do things himself in obedience

to orders before you resort to punishment to compel him to do so. Make the dog understand that he cannot avoid doing as he is ordered and that the sooner he does it the sooner the lesson will be over. This part of the lessons will require considerable patience, but is one kind of force, and used at this time will pay in the end, and is good discipline for the breaker as well as for the dog.

* * * Settled by the Dog.

Everyone knows the story of the dog claimed by two persons which is allowed to decide between them, and goes straight to its rightful master, putting the thief to shame. A variation was recorded a little while ago in a provincial town.

A knife-grinder complained that a ragman had stolen his dog. When the police looked into the matter they found that the ragman had in his possession a fine Great Dane, of which he could give no satisfactory account. The case was brought into court, and the Judge decided that the dog should settle the matter.

The two claimants were placed one at either end of a long table. The dog was led in and held by a string midway between them. The judge then clapped his hands three times and the men began to whistle vigorously to the dog. At the same instant the dog was set free.

The Great Dane looked at the ragman, then at the knife-grinder; then at one bound he cleared the open space and disappeared through the door, to the astonishment of the court.

The fact was the dog belonged to neither of the contestants, but to a gentleman to whose house he went straight from the court room. He had been stolen successively by the knife-grinder and the ragman.

* * *
That handsome collic, Calendar Bruce, belonging to Afton Collic Kennels, Montreal, has just returned from Brandon, Man., where he was competing in the open class at the show held there, this month. He was decorated with the first prize medal.

Mrs. Newrich—"But, Henry, how could you have given \$500 for this dog. Is he really worth it?"

Mr. Newrich, (with deep feeling)—"Worth it? Ah, Emily, if you or I had the pedigree that dog has."

International Anglers' Association.

At the meeting of the International Anglers' Association held at Gananoque, Ont., August 1, Charles H. Skinner, of Albany, N.Y., occupied the chair, and the following officers for the ensuing year were elected: President, Wm. C. Browning, New York; first vice-president, H. R. Heath, Brooklyn; second vice-president, Chas. R. Skinner, Albany, N.Y.; secretary, W. H. Thompson, Alexandria Bay; treasurer, R. P. Grant Clayton, N.Y.; executive committee, A. C. Cornwall, G. H. Strough, R. H. Pullman, Chas. G. Emery, T. B. Kerr, Chas. Sterlner, T. A. Gillespie, C. E. Britton, H. A. Malthy, Wm. Griffith, George H. Boty and O. G. Staples.



SWISS RIFLE CLUBS.

A. P. Humphrey, a prominent English rifleman, recently returned to England from Switzerland, having made a study of rifle practice in that country. For the information of the Council of the National Rifle Association of Great Britain, he made the following report:

RIFLE CLUBS.

The Swiss rifle clubs have a close connection with the military system of the country, and owe their prosperity mainly to such connection. They have also the prestige of ancient tradition—the history of some of them going back more than four centuries. Some are possessed of considerable wealth.

The Swiss army consists of a militia, in which all men are liable to serve between the ages of twenty and fifty years. In the first year—speaking of the infantry only—each man undergoes a recruits' course of forty-five days, after which he is for twelve years a member of the elite, in which he undergoes a training of sixteen days every second year. From his thirteenth to his twenty-fifth year of service he is a member of the landwehr, and undergoes a training of five days every fourth year. Thenceforward until he is fifty years of age he is a member of the landstrum, a force of which 30 per cent. are armed and are required to undergo inspection once a year. Every member of the elite, the landwehr, and the armed landstrum is obliged annually to perform a rifle practice similar to our class firing, consisting of from thirty to forty rounds, which he may do in a recognized shooting club under strictly regulation conditions. Having done this, he is exempted from a musketry course lasting three days, which he would otherwise be required to undergo.

The government pays to the clubs the value of the ammunition used in the above regulation practice, and the firers can claim it of the clubs. If a man obtains the requisite score with a small number of shots, he can claim a somewhat larger sum than the ammunition has cost him; if he has to fire the maximum number of rounds (forty), he is slightly a loser. Thus he has an inducement to do his best. The government supplies the clubs with ammuni-

tion for private practice at the rate of 6 centimes per round, the cost price to the government being 8 centimes.

Every member of the elite, the landwehr, and of the armed landstrum keeps his rifle at his home, subject to periodic inspection, and can use it for practice as much as he pleases.

Provision is made for the representation of the military authorities on the committees of the recognized clubs, and every such club must admit an inspecting officer to its range at any time at which rifle practice is proceeding. A local rifle club can be recognized if its members are ten or more in number, and the regulation musketry practice may be fired on its range if the range fulfils the necessary conditions. Clubs in the same district may combine for the use of a central range fulfilling these conditions. The members' subscriptions, so far as I learned, vary from nothing to ten or twelve francs per annum. In wealthy clubs there may be only an entrance subscription. Where there is no regular subscription an occasional contribution may be levied to meet expenses which, in village clubs, where the arrangements are most elementary, are very small. The club shooting takes place for the most part on Sundays, and sweepstakes or other matches with small entry fees are commonly arranged.

In 1898—the latest year for which I have the figures—there were in Switzerland 3,446 rifle clubs, with a membership of 210,491, of whom 163,409 fired the regulation course. The number of military cartridges drawn by the clubs was 16,132,500. The number of clubs and members has risen almost continuously since 1874, when the regulations for the annual musketry course in connection with the clubs came into effect. A notable increase occurred in 1885, when the same regulations were extended to the landstrum.

The great advantages enjoyed by the Swiss clubs appear to be the following: (1) recognition for the purpose of the military regulation rifle practice; (2) supply of government ammunition below cost price; (3) the possession by the men of government rifles in their own homes; (4) the small expense with which ranges can be made and

worked (see under ranges); (5) the custom of shooting on Sundays, when men are free from work; (6) the great popularity of rifle shooting and belief in its value for national defence; and, partly as a consequence, freedom from competition of athletic sports of other kinds.

RANGES.

The provision of ranges is much simplified in Switzerland by the fact that ordinary rifle practice is seldom done at a greater distance than 400 metres, the usual distance being 300 metres, and by there being no insistence on an unpractical degree of safety. The firers are careful, and accidents rarely occur. A mountain or forest is commonly at hand to form an inexpensive butt, and the habitual confinement of the firing to Sunday avoids interference with persons working on the land.

The parish is bound to provide ground for a range, and sometimes puts up the marker's shelter; the club then provides the targets and the marking. Rifle shooting is so popular that owners of land are disinclined to raise obstacles, and the question of game gives no trouble, because all shooting rights belong to the public and are let by auction.

Ranges are sometimes of the simplest—a paper target is hung upon a rough fir frame against a hillside, and the members of the club take their turns at marking to save expense, standing without shelter as far to one side as they consider safe.

On the other hand there are ranges of the greatest elaboration. The range completed in 1893 at Albisgutli, near Zurich, is provided with a great shooting house or building containing covered firing points for fifty-three targets at 300 metres, fifteen at 400 metres, and for twelve revolver targets; also committee rooms, armory, and so forth, and there is a tunneled way from the firing points to the markers' trench. The targets and markers' trench are roofed over with glass roofing, protected from bullets by a concrete wall supported on iron uprights. There is electric communication between every target and its firing point; and the register keeper rings up the marker for every shot. At Albisgutli the firing at 300 metres is done from the ground floor, that at 400 metres is done from the upper floor, at targets placed behind the others and higher up on the mountain side, a wooden screen across the range being so placed that the 400 metre targets cannot be seen from the ground floor, nor the 300 metre targets from the upper floor. Adjoining is a handsome building with large hall capable of seating 1,500 people, and provision for serving re-

freshments to 4,500 people, most of whom in fine weather are seated at tables out of doors. About 900,000 francs have been laid out upon this range. It is proposed to extend the Zurich system of tramways to Albisgutli—the place is in fact a popular Sunday resort, and will pay.

The Swiss marking on well-appointed ranges is rapid, because the spotting disk is not used, the position of the shots being shown with the marking disk, the edge of which, and not the centre, is placed against the shot hole. Thus no dummy target is required, and a pair of targets are used alternately on each target gear.

SAFETY RANGES.

As regards safety ranges, I was disappointed to find that in the strict sense of the term, as denoting ranges from which bullets are prevented from escaping in any direction, there are none to be found in Switzerland. The Swiss do, however, use screens of concrete walling or timber casing filled with gravel to intercept the bullets in particular directions, and although complete safety is only obtainable by firing down a tunnel, yet the principle of screens could possibly be applied so as to give reasonable safety in all directions. At a range at Berne there is a high wall about six yards in front of the shooting house, with a small window-shaped embrasure in front of every firing point. This wall will catch any wildly fired shots, but there is no provision for retaining those which glance off the edges of the embrasures. The range is further provided with an earth bank on the right hand side, protecting the railway which runs close to the range; but similar protection might have been obtained, and is obtained elsewhere, by the use of a series of screens in oblique echelon. At Lucerne there are three rows of screening, raised on upright timbers, extending one behind the other right across the range to catch high shots, but there is no provision to stop ricochets, or wide side shots. It must be remembered that any system of safety range involves the use of only a single line of firing points at only a moderate distance from the targets; and provision may have to be made at the firing points of platforms at different levels—for the men to fire from according to the positions they adopt, so that the flight of the bullets may start at an approximately uniform height. Change of distance could only be arranged by the use of intermediate marking trenches, the targets being removable when those further off are to be fired at; and these trenches and their shelters would have to be part of a system of ricochet-stopping earth banks. Safety

ranges, if they are possible, must involve so much expense and restriction of convenience as to be applicable only to exceptional circumstances

I hope to receive from engineer J. Keller, of Zurich, who is planning screen arrangements for various new ranges, some plans giving his ideas of a normal safety range, it being understood that in every

WINNIPEG TOURNAMENT.

The fourth annual trap shooting tournament and Western Canadian championships in connection with the Winnipeg Industrial Exhibition took place July 25, 26 and 27.

FIRST DAY'S COMPETITION.

This competition was open to amateur trap shots residing in Manitoba, the Northwest Territories and as far east as Port Arthur.



Second Falls on Magpie River, Northern Ontario.

case the arrangement necessarily depends on the circumstances of the ground, and these I shall be pleased to lay before the council.

Generally speaking, the Swiss have the following advantages which facilitate their obtaining ranges: Obligation on the part of the public to provide ground; absence of insistence of an ideal standard of safety to the public; indisposition on the part of landowners to make difficulties; willingness on the part of shooting men to put up with inexpensive arrangements; frequent occurrence of mountains or forests available as stop butts; in populous places, the large number of contributing members of clubs, and consequent funds available for providing handsomely appointed ranges; non-requirement of long ranges.

Thos. Donley announces his fourth annual tournament at live birds and targets at St. Thomas, Ont., Sept. 18, 19, 20 and 21.

Following is the complete score:—

Name.	Ev't 1-10 hrs.	Ev't 2-15 hrs.	Ev't 3-15 hrs.	Ev't 4-15 hrs.	Ev't 5-15 hrs.
Williamson	71	112			
C. A. Hale	81	114	15	13	14
F. Sprague	81	112	12		
G. O. Seymour	10	14	14	11	13
E. R. Cavillier	9	15			11
J. Maybee	7	10			11
A. W. du Bray	8	10	10	13	14
F. G. Simpson	10	12	13		
S. Fairbairn			11		
A. Robble	8	14	12	13	11
G. W. Baldwin			11		
R. H. Kirkley	9				12
A. Rodman	7				
C. Soldan		11			
W. Trevennan		11	11		
R. G. Robinson	7			11	
D. Balm	7	12	12	12	
C. N. Dalgleish			10		
M. J. Miller			12		
H. Alder			10		
O. A. Critchley			11		
E. Soldan			11		
F. W. Scott		14	14		
W. E. Rowe				12	
T. Bean					12
Jos. Lemon				12	

J. Nelson	11
C. Martinson	12
W. H. Spurling	12
Dr. Bell	12
C. C. Hoch	11
C. E. Robbins	11
G. E. Duls	12
Vannette	12
Wm. Wood	11

SECOND DAY.

The handsome trophy presented by the Robin Hood Powder Co., of Swanton, Vt., was won by F. C. Simpson.

In the team shoot seven teams entered, and Grand Forks had the honor of getting both the gold medals for first place and the leather medals for last place. Following are the names and the scores:

Winnipeg, No. 1.—J. Lemon, W. Dodd, R. Kirkby, G. Andrew, score 46.

Winnipeg, No. 2.—F. W. Scott, D. H. Balm, F. G. Simpson, J. Cadham, score 54

Minnedosa—S. Fairbairn, C. Solden, T. Williamson, E. Solden, score 46.

Grand Forks, No. 2.—J. Mayble, W. Wood, Mr. Beare, Dr. Brekkie, score 10.

Grand Forks, No. 1.—G. Duls, C. A. Hale, B. O. Seymour, H. R. Wells, score 57.

Calgary—R. G. Robinson, M. Turner, H. Trevenen, O. A. Critchley, score 20.

The following American marksmen were shooting at the birds: Ed. Hale, G. E. Duls, W. B. Wood, O. B. Brekkie, B. O. Seymour, W. N. Wells, A. Bennett, Grand Forks; F. H. Sprague, F. Handy, R. McKellar, Gratton; Ed. Caviller, Pembina; W. E. Rowe, W. L. Vannett, C. Hoch, Crookston; A. Nelson, C. Martinson, Lake Park. Capt. A. W. Aubray represented Parker Bros.

Appended is the complete score of the day's contests:

Name.	Ev't 1-10 tgts.	Ev't 2-15 tgts.	Ev't 4-15 tgts.	Ev't 6-15 tgts.	Ev't 6-W. C. C., 50 tgts.	Ev't 7-15 tgts.	Ev't 8-15 tgts.	Ev't 9-10 tgts.
C. A. Hale	10	11	10	10	11	11	14	2
B. O. Seymour	7	13	13	12	11	11	11	2
H. N. Wells	9	13	10	11	7	10	9	2
Dr. Brekkie	7	9	11	3	10	9	4	2
W. E. Rowe	8	13	11	9	11	11	11	2
C. C. Hoch	9	11	13	9	11	11	11	2
A. Robble	6	13	13	10	12	7	8	2
W. L. Vannett	3	11	13	9	9	10	9	2
Jos. Lemon	7	9	13	9	34	8	9	5
C. E. Robbins	9	11	12	10	11	13	5	2
F. H. Sprague	9	15	14	12	12	13	9	2
N. W. Hostetter	8	12	11	11	10	10	9	2
R. McKellar	6	11	9	8	9	8	7	2
F. Handy	6	12	12	9	12	9	7	2
S. Fairbairn	6	12	9	13	30	10	10	2
F. S. Stanley	3	3	13	4				2
M. S. Deeston	4	9	10	6	29	5	3	2
A. J. Patterson	2	8	8	10				2
J. Cadham	3	10	12	13	35	11	9	2
A. W. du Bray	6	14	12	10	9	11	8	2
F. D. Simpson	7	8	12	12	43	12	9	2
G. W. Baldwin	4	11	12	11	35	9	13	2
W. B. Wood	5	11	8	11	9	5	7	2
E. R. Caviller	8	10	12	9	11	13	9	2
R. G. Robinson	4	9	9	30	5	10	4	2
W. Trevenen	9	12	9	8				2
T. Martinson	7	12	12	9	8			2
G. Andrew	6	8	40	6	33	11	9	5
W. Dodd	6	14	11	14	38	14	14	8
F. Scott	7				39	11		8
D. Balm	10	13	12	12	39	11	12	6
J. G. Soper	3	11	12			8		8
R. H. Kirkby	9	12	11	8	39	11	11	9
A. Rodman	4							9
C. Wellband	6	12	12	35	15	10	10	10

O. A. Critchley	8	7							
— Beare	4	13							
— Parker	4								
J. Maybee	9	12	11	11	10	12	7		
W. H. Spurling	2								
J. N. Williamson	10				38				
H. Lightcap	9	11	7	30	9	6			
Dr. Dalgleish	9				28				
H. Alder					9	28			
G. C. McTavish	12	6	33						
J. Spence	9	13	29	6	12	5			
J. O. Cadham	4								
M. Putnam					31	12	6		
C. M. Scott					29				
C. Soldan					38				
E. Soldan					26				
F. S. Cadham					37				
H. G. Spurgeon					29				
E. James					23				
S. H. Jones					18				
— Lano					19				
M. Varcoe					130				
R. J. Whittle									

THIRD DAY.

The scores were:

Name.	Ev't 10-10 tgts.	Ev't 11-15 tgts.	Interm. C. C., 50 tgts.	Ev't 13-15 tgts.	Ev't 14-15 tgts.	Ev't 16-15 tgts.	Ev't 17-15 tgts.
W. E. Rowe	9	10	32	10	11	13	14
C. C. Hoch	10	9	36	11	11	11	10
A. Robble	8	9		8	13	11	12
C. Cavaller	8	10		12	12	13	13
W. L. Vannett	4	14	36	6	8	12	10
Geo. E. Duls	8	11	38	8	13	14	11
C. A. Hale	10	13	34	8	12	11	12
H. O. Seymour	7	12	35	10	14	12	14
H. N. Wells	7	12	37	11	9	11	9
J. Mabee	8	12	39	14	13	13	14
Robbins	9	10	42	13	15	12	14
Sprague	7	11	40	13	8	13	9
Hostetter	0	13	40	13	12	14	9
Dr. Brekkie	7	10		10	12	7	9
F. Handy	8	10	35	7	11	9	13
W. Dodd	8	13	39	10	10	12	9
F. G. Simpson	9	12	43	11	10	12	12
D. Balm	9	10	37	7	13	13	13
W. Wood	7	10		9	13	8	11
T. Beare	6	10					
A. W. du Bray	7	11		12	6	10	12
G. Baldwin	7	11		8	11	10	7
R. Kirkby	8	11	37	12	9	9	13
C. Martinson	5	11	13				
C. Wellband	8	10	36	12	9	11	12
R. G. Robinson	5	7	38	6	12	13	12
O. A. Critchley	8		34				
S. Fairbairn	7	9	33				
J. Spence	8	11	39	8	13	14	12
F. W. Scott	5		30				
A. J. Patten	7			9	10	11	
J. Cadham			33	9	8		
F. Stanley				9	10		
R. W. Holland						12	12
J. Lemon						10	7
J. C. Huston						8	
M. Putnam						7	7
W. Trevenen						7	11
H. Lightcap						10	11

In the International team shoot the teams and scores were as follows, each competitor having 20 birds:

American team—Robbins 17, Sprague 16, Hostetter 16, Woods 11, Duls 13, Kale 10, Seymour 16, Wells 11, Mabee 15, Rowe 17, Hoch 16, Robble 14, Cavaller 14, Vannet 10 —205.

Canadian team—Lemon 15, Wellband 14, Keele 14, Trevenen 16, Simpson 16, Lightcap 12, Kirkby 15, Baldwin 12, Spence 11, Dodd 13, Balm 16, Cadham 12, Robinson 17, Patterson 10—103.

PARKER GUN COMPETITION.

W. Dodd 64, winner; G. Andrew 50, F. W. Scott 58, J. Lemon 58, Williamson 56, F. Cadham 55, Robinson 55, D. H. Balm 55, Trevenen 53, M. Putnam 50, H. Boxer 48, A. Spurling 47, Geo. Baldwin 46.

Stray Shots.

Hamilton (Ont.) Gun Club will hold its summer tournament Sept. 1st and 3rd.

Brant County Rod and Gun Club announces their annual tournament to be held at Brantford, Ont., Aug. 13 and 14. A very attractive programme has been prepared. All shooting will be over a magautrap, and will be open to Canadian amateurs only. The Brantford shoots are always well patronized, and this one should be no exception.

Mr. J. S. Fanning, the Lafin & Rand smokeless powder expert, continues to do good work at the trap. He recently broke 143 out of 145 targets at the Robin Hood tournament at Swanton, Vt.

Clarence J. Nauman killed 97 birds out of 100, won \$100, and established a new record for the Pacific Coast in a match recently with Peter J. Walsh. The latter grazed 86.

Paul North, of the Cleveland Target Company, has returned from England, where he has been trying to introduce the magautrap. He says the "magautrap" is too "sudden" for the British trap shooter, who takes this sport in a leisurely way, combined with cups of tea and other refreshments. The targets are thrown much higher and at longer rise than in America, the use of both barrels being allowed.

Mr. Macintosh, an Australian, won the Grand Prix de Centenaire, at Paris, in June, with the score of 22 straight pigeons. Marquis de Villaviciosa, an Italian, was second with 21, and Edgar G. Murphy, of New York, third with 20.

It is proposed, in England, to teach school boys the use of the rifle. If intelligently carried out this must have a tremendous influence for good in the military life of the nation. We hope to see the day not far distant, when every boy will be required as a fixed part of his curriculum to learn not only the elements of military drill, but also the effective use of the shot gun and rifle. Then in time every citizen will be a soldier of the highest type, ready to hand, and we will be able to count our military strength by millions, instead of thousands.

Notes by E. E.

A timely book is "Sharpshooting," for sport and war, by W. W. Greener, author of the "Gun and its Development," etc. The author states in his preface: "Rifle shooting is to-day the subject of supreme importance to every Briton, for only by general proficiency in the use of the best weapon can the Empire be maintained and the national safety secured. I am convinced that every able-bodied man who is willing to learn and practice may become an efficient marksman," and having thus pithily stated facts which will appeal to every thinking Briton, he proceeds to show the reasons for the faith that is in him by setting forth as clearly as words can do it in twelve chapters and 161 pages, the ways and means to become expert in rifle shooting, as well as treating of many related matters of interest to the rifleman. The book is not only practical but is also written in an interesting manner. It is divided into chapters as follows:

Chapter I., A Practical Policy—Importance of Rifle Shooting, Good Marksmanship Essential to All Schemes of National Defence, The Use of the Rifle to Become General, The British a Nation of Sharpshooters, Practical Instruction to be Given in Elementary Schools, A Compulsory Subject for the Upper Standards, Ample Opportunities for Public Practice to be Accorded.

Chapter II., The Sport of Rifle Shooting—The Rifle as a means to Sport and Recreation, Target Shooting, The Bisley Meeting, Home Competitions, Military Practice, Interesting Exercises, Game Shooting with the Rifle.

Chapter III., Varieties of the Rifle—Military Pattern Rifle, English and Foreign, Ammunition, Target Rifle, Practice Rifles, Weapons of Precision, Game and Sporting Rifles, How to Choose a Rifle, Testing Shooting, Value of Diagrams, Points of a Good Rifle.

Chapter IV., Preliminary Practice—Practical Instruction, The Value of Personal Example, Rules, Positions for Firing Off-hand, Kneeling, Prone; Military Positions, Recognized, Unrecognized, and Disallowed; Shooting from Rests, Aim, Aiming Drill, Alignment, The Eye, Blur, Sighting, Aids to Definition, Pull off, How to Hold and Fire the Rifle.

Chapter V., Hints to Beginners—Some Causes of Failure, Correcting the Pull-off, The Aim, How to Sight, The Proper Use of the Rifle, Proficiency, The Score, Register, Shooting Appliances.

Chapter VI., To Hit the Mark—Trajectories of Rifle Bullets, Recoil, Deviation,

Deflection, Flip, Drift Lateral and Vertical, Range, Elevation, Wind Allowance, Value of Practice, of Observation, and of Records; Game Shooting, Snaps-shooting, Sharpshooting.

Chapter VII., The Expert Marksman—Theories, External Ballistics, Zero, Refraction, Mirage, Variations of Temperature and Barometric Pressure, Altitude, Wind Velocity, Table of Angles, Observations, Records vs. Calculations, Rule for Mathematical Building of Angles, Mirage, Refraction.

Chapter VIII., Knights of the Trigger—What the Rifle Can Do, The Highest Possible, Some Records, Feats Old and New, Fancy Shooting, Stage Tricks, Marksmen, Dr. Carver, Ira Patne.

Chapter IX., Ranges—Closed and Open Ranges, Land, Way Leaves, Disturbance, Right to Shoot, Constructing the Range, Short Closed Range for Practice, Open Range for Work, The Butts and Pits, Targets, Marking, Scoring, Signaling.

Chapter X., Rifle Clubs—How to Form a Rifle Club, How to Manage it, Rules, Duties, Liabilities.

Chapter XI., Competitions—Match Shooting, Rules, Team Shooting, Training, The Bisley Meeting, The National Rifle Association, Its Object, History, Work and Possibilities, Prizes, The Regulations for Members' Competitions.

Chapter XII.—The Rifle Club Movement. Published by R. A. Everett & Co., London, England.

The Ideal Manufacturing Co., of New Haven, Conn., has brought out a new mould for the .44 calibre Russian model revolver bullet. The bullet weighs 205 grains.

Telescope sights for rifles are increasing rapidly in popularity, but a better means for attaching them to the rifle barrels is required. Few like to mutilate a rifle as must now occur in placing the scope.

The Field, of London, Eng., announces the invention and perfection of an automatic revolver by Col. Fosbery, V.C., the inventor of the Paradox gun, which the Webley & Scott Revolver and Arms Co. has been working upon for the last two years. It will soon place it upon the market. The automatic action is obtained by allowing the barrel and chamber to recoil a short distance on a slide, this motion being utilized by means of a fixed stud engaging in the diagonal grooves cut on the exterior of the chamber. The recoil automatically revolves the cylinder and brings the lock to full cock, leaving the shooter merely to take aim and press the trigger. A trial of these pistols was witnessed by the Field, when the following results were obtained: Rapidity of fire—six aimed shots in 10 sec-

onds, making a 3-inch diagram at 20 yards; 100 rounds fired in 3 minutes 15 seconds. The pistol shoots equally well the .450 black powder cartridge and the present service ammunition with much less recoil than with the ordinary revolver, consequently quicker and more accurate aim may be taken. The mechanism is sufficiently simple to be easily stripped and mounted in the field by any ordinary armorer.

A. C. Gould, author of Modern American Pistols and Revolvers, in writing recently about smokeless powder in revolvers says: "The factory loaded smokeless powder cartridges for revolvers are not placed on the market until they have been very carefully tested by experienced shooters aided by modern instruments to determine the safety of the ammunition; this is true also with the smokeless powder for revolvers. But the experimenter who thinks that all smokeless powders are alike, or the investigator who guesses that some particular brand of smokeless powder would be better than that recommended by powder experts, causes a good deal of trouble and forces the revolver manufacturers for self protection to decline to guarantee their revolvers when smokeless powder is used.

We repeat that the best types of American revolvers are now made for smokeless powders. The Government tests submitted revolvers with such powders; every member of the recent American team in the late international revolver match used smokeless powder at one or both ranges. The right smokeless powder is safe in first-class revolvers made for smokeless powders when properly loaded, but unsafe if not loaded right; there are kinds of smokeless powders that are unsafe in any kind of revolver or pistol and cannot be loaded so as to be safe."

One interesting feature of the programme of the ninth annual meeting of the New Jersey State Rifle Association (National Rifle Association), which takes place at Sea Girt, N. J., Aug. 31 to Sept. 8 inclusive, will be the Colt automatic pistol match, open to everybody, 50 yards.

Recent accidents give especial point to the following from one of the highest authorities on firearms, viz.: All firearms are dangerous if handled carelessly. Every inch you take off a rifle or gun barrel increases the liability to accident. Every additional shot the arm is made to fire without reloading by hand increases its danger. But all these dangers are reduced to a minimum by exercising proper care. Never take it for granted that a firearm is not loaded. Satisfy yourself in that respect before cocking it or touching the trigger or passing the arm to any other person. If you are not acquainted with the mechanism enough to open the action let the arm alone.

The new Daly three-barrel gun is made for nitro powder in both gun and rifle barrels, and is the first three-barrel gun on the American market to use a high power smokeless cartridge in the rifle barrel, it uses the 30.30 Winchester.

AMATEUR PHOTOGRAPHY

Conducted by H. McBean Johnstone

THE SPORTSMAN AND THE HAND CAMERA.

TH**ERE** is no doubt that hand camera work, when properly understood, is extremely simple, but it is a fact, worthy of special note, that the most successful workers in this branch are those who have served their apprenticeship to photography with an old-fashioned field instrument securely mounted on a tripod. It would appear to be a common idea with the novice when buying a camera, that to have to stop before making an exposure and put one's head under a black cloth to focus, and to have to carry a set of legs and a lot of little boxes that only hold two plates each, is a serious objection to a field-camera when for the same and even less money, can be purchased one of those little rather-covered boxes that carry enough film for a hundred pictures (?) and one only has to press a button each time to get it.

For the sportsman there is probably some reason in wanting a hand instrument. With him there will probably always remain a desire to photograph the game in its native lair—if he be an angler, to prove his fish stories afterward—and of all the hundred and one cameras recently placed on the market, the best for this purpose is probably the one that goes under the name of the "Twin Lens," though why that name should apply to it any more than to a stereoscopic instrument, I quite fail to understand.

The "Twin Lens" is practically a double camera, having a pair of matched lenses placed one above the other, the upper of which reflects the image on a ground glass on the top of the instrument, the exact size it will appear in the finished picture, while the lower, to which the shutter is fitted, makes the impression on the plate or film. The top of the camera is fitted with a side-closed, focussing hood, which enables the operator to focus very sharply. It has rack and pinion focussing device so that the front may be racked out quite a distance in order to use long-focus lenses and, when not in use, racks in, thus making a very compact little instrument. Combined with these advantages, the camera is both light and portable, and

when closed the outside dimensions of a 4 x 5 are only about 7 x 8 x 6 inches.

In developing hand-camera exposures it will generally be noticed that the tendency is toward under, rather than over-exposure; so that to rectify this, the developer used or the proportions mixed, should be made suitable. That a beginner will over-expose is a very remote contingency indeed. More experienced camerists who are used to time exposures, and a plentiful employment of potassium-bromide, rather dread the possibility of under-exposure and endeavor to avoid it, though on the other hand by using a quick plate with a large aperture, in a good light, they often over-expose, or what is practically the same thing, flatten their results by using too strong a developer. This mistake is but seldom made by a beginner. Though, on consideration he is well aware that f 8 in a hand-camera is equal to f 8 in a tripod instrument, he will take snap-shots at one-fiftieth of a second with the former, where with the latter, he would never dream of allowing less than a half or perhaps a full second. He is too apt to forget that he is working under precisely the same conditions as with his camera on a stand, and appears to imagine some sort of magical improvement that makes him independent of the ordinary factors of exposure, such as, relative values of light, speed of plate and lens, and size of diaphragm used. This is absurd; but, nevertheless there is a tendency to attempt work with a hand-camera, that a little forethought would show to be impossible.

The beginner in purchasing a hand-instrument ought always to make certain that the shutter is capable of being regulated for snap-shots of from one second to one one-hundredth of a second duration, and that the lens is of a type fast enough to stand this brief exposure, and still give full detail in the shadows. The photographer who has his shutter working at one speed and one aperture, and who takes pictures at any hour of the day on any day in the year, certainly cannot expect to secure the uniformly good results that attend the work of the more careful operator with a shutter capable of the fullest regulation. Remember then, that you are using a camera, and that brains are just as

essential to the successful manipulation of the one in the hand as to the other on the tripod.

Exposure tables are not often resorted to by the man who merely desires to own a "box" so that he can get pictures here and there of the many little incidents connected with summer life in the woods or on the water, but they are nevertheless very useful. It is unnecessary to occupy space here in giving one, as almost all the books issued by the plate makers contain several, any one of which will serve for the use of a hand-camera beginner. But in most of those given, as the estimation of the actinic light is such a difficult matter, it must be treated as approximate only. Probably the greatest value of such a table lies in its comparativeness, as showing the difference made by light and aperture.

A table for plate speeds is not quite so reliable, as plates are not issued at set or standard speeds at all, the highest speed being entirely dependent upon the makers, each of whom does his best to increase it. But a general average may be taken as follows:

Slow or ordinary..	3
Medium rapidity..	2
Extra rapid..	1

In cases where the maker issues only two rapidities, the safest way is to reckon them somewhere between the above, say 1 to 2 1-2.

Now a very close adherence to all of these rules is hardly to be expected of the operator, and indeed is not required of him, as some of the differences are so slight as to make, for practical purposes, no alteration. Moreover the surrounding conditions have to be taken into consideration. For instance on a bright, sunny day in January, with plenty of snow on the ground acting as a powerful reflector, the actinic quality of the light is almost as great as on the brightest day in June or July. Also there are other matters, of which space will not permit my detailing, but which have to be taken into our calculations. But what exposure-tables do is to give a very good approximate guide in the matter of the duration of exposure under ordinary circumstances, for fully exposed negatives.

Now just a word or two on the plates for hand-camera work, taking it, of course, for granted, that by this is meant out-of-doors or landscape photography. The advice given in all photographic text books is that in this class of work, a slow plate is preferable to a fast one, and most of us have accepted the dictum without question. But according to Capt. Abney, except in rare instances a rapid plate is de-

sirable because of the superior graduation which they yield, the results less harsh, and the detail in shadows and high lights more evident. But with this statement he also issues a caution. His observations are here quoted from "Photography": "But in using rapid plates care has to be taken that they will give sufficient density in the highest lights. If plate makers would use sufficient iodide in the emulsions, equal rapidity can be obtained, but with an increase in density. Plates made of pure bromide are apt to suffer in density giving qualities if their rapidity is pressed to a maximum." It seems to me that the very best thing that can be done under the circumstances will be to employ a plate of medium rapidity for practically all work, for in changing from quick to slow or vice versa, we are introducing loopholes of error in both exposure and development.

In this question of plate rapidities there lies the solution of the problem, why do some workers fail when others score triumphs? The successful workers choose the favorable weather, and the unsuccessful one tries to make the weather suit his camera. The one only takes out the instrument when the conditions are favorable, whilst the other endeavors to bend the conditions to his desire. One succeeds always, the other occasionally. Therefore, one can take slow plates out on a favorable day and secure good results, whereas the other uses his camera upon any day irrespective of light, and in spite of the fact that he uses the celebrated "Catch-em-all" plates his work is a failure.]

In focussing, the average amateur and no small percentage of the profession, think they are all right if they get the image sharp all over. It is evident that in a picture that is worthy to be so called, there must be certain points of interest, that it is desirable to make prominent and emphasize, all other portions being made subordinate to them, and as a rule, it is only these principal points that should be made sharp. In doing this, in order to make the best of the depth of focus of the lens, the most distant object that is desired should be brought into focus first, without any diaphragm. Then put in the stop chosen, and note the point nearer than the one first taken, when absolute sharpness ceases. Take out the stop, and focus this latter point; then re-insert the stop, and the operation is finished. In portraiture the reverse method is adopted. You commence by focussing the nearest object that is to be sharp, and then proceed to the distant point.

In spite of the undenied superiority of ferrugalic acid as a developer, it will be

found that among the new developers there are several, which if intelligently used, will produce results distinguishable from pyro-developed negatives, only by their color. The following metol-hydroquinonim solution will secure clear, brilliant, crisp negatives, which as a consequence of their being free from yellow stain, are quick printers.
Pure hot water... .. 160 oz.

detail and contrast can be obtained. A good deal can be coaxed out of a plate by a little dodging. Warmth promotes activity, and breathing on the part needing improvement is often beneficial. Clouds, on the other hand, have, as a rule, to be kept back. The easiest way to do this, after the image is well out, is to pour off some of the developer and keep the rest principally in the foreground with occasional



A Fair Head, Kippewa District.

Metol... .. 1 oz.
Hydrochinon... .. 60 gr.
Sulphite of soda (crys)... .. 6 oz.
Carbonate of soda (crys)... .. 5 oz.

To develop take of this stock solution and water equal parts. Less water gives more density and contrast, and more has the effect of bringing the development on slower and securing more detail. In development always aim for detail first. By beginning with a dilute solution and then finishing with a stronger mixture, both

movement to prevent the formation of a definite line.

And now in conclusion, you sportsmen photographers who heretofore have merely used your "box" to snap up the wayside incidents, why not try to achieve something more. It is only necessary for you to wander through a photographic exhibition to see that it can be done. It is not that your subjects are poor, but that, as a rule, they are photographed from wrong points of view or else improperly arrang-

ed. It would be well for you to make at least a superficial study of the laws of composition and the arrangement of light and shade, until, by intuition rather than by following rules, your average productions rise above the level of the mere photogram to the plane of a picture.

My First Lesson in Photography.

The dealer says that I can have one or two if I wish, but that lessons would be hardly of much use to an experienced hand like myself (fancy describing me like this), and were chiefly designed to show what the apparatus would do. I said that I should like to see what mine would do. Without farther parley I was consigned to the tender mercies of a youth of eighteen, who was described as "the operator," and with him I mounted flights of stairs innumerable until we arrived at "the studio," which must have been several hundred feet above the level of the sea.

The camera which I have purchased is reared upon its three legs; the operator points the lens out of the studio window, which commands an extensive prospect of chimney-pots; puts his head under the focussing cloth, and presently invites me to do so myself. At first I could see nothing, but when my eyes became accustomed to the gloom I was presently able to distinguish a picture on the ground-glass screen.

"I fancy that the camera must be upside down," I remark with some diffidence.

The youth laughs—rather rudely, it seems to me. I don't like this boy. Then he coughs and says:

"The image as seen in the camera is inverted."

"But why is it?" I innocently ask.

"It allus is," says the operator; and 'tis was the sole explanation which I could get out of him. "It allus is." Fancying that a tip would make him more communicative, I hinted that if he would give me as much information as possible, a certain half crown might be transferred from my purse to his. This had the required effect, and my mentor threw off his reserve and became quite eloquent, and this is what he told me about the inverted image:

"We've 'ad quite a job over that upside down picture, I can tell yer. When our gov'nor took this business over he knowed nothing about photography, but he's a rare business man all the same—he's got his 'ed screwed on and no mistake. Well, directly he sees the picture upside down, he says, 'That won't do,' he says, 'you must stick the thing up the right way.' Well, our head operator says, 'Sir, it can't be done.' 'Can't be done?' he roars. 'Who says so? Why don't you screw the ground glass on upside down?' So we gets a screwdriver and does as he says. When he sees that that made no difference, he says, 'Well, turn the lens upside down.' But we showed him that that made no difference either. At last he gets in a regular passion, and says, 'I will have that pic-

ture on the screen the right way up; and I'll give a £10 note to the man that finds out the trick.' Well, we tries all we knows, and after a few days he calls us together and asks us who's won the £10. No one spoke; at last I says, 'Well, sir, we've tried very 'ard, but it ain't no go --the only thing as we can suggest is that if you want to see the thing right way up you must stand on yer 'ed. 'What?' he roars out; d'ye think that we can ask ladies and gentlemen as comes 'ere for their lessons to stand on their 'eds, you blooming juggins? Why, it would ruin the business.' After that he sobered down a bit and gave the thing up as a bad job. But, between ourselves, sir, I think if any gentleman, like yourself, were to worry the thing out like—why, there's 'apence in it."

—Photo News. * * *

Correspondence.

Correspondence should be addressed to Box 651, Sarnia.

John Adams—Aristotype paper is a paper coated with gelatino-chloride of silver for the printing out process. It gives strong prints from flat negatives, and is very simple to use.

"Willie Boy."—If your pictures had been more correctly exposed, the detail would have been better. The one of the moose is particularly good.

Filmy Prints.—Wash your prints longer in the first water.

Half Tone.—The moss tone as you call it, is simply another name for half tone. A picture without half tone would be very harsh.

Yellow Negatives.—I would advise that you use a clearing bath for the negatives you now have, and in future it will be better to use an acid fixing bath.

Hunter.—The pictures you enclose are very well executed. It is indeed a pleasure for me to be in communication with you.

Lens.—There is no such thing as universal focus. You mean fixed focus. Certainly; I would do it if I were in your position.

* * *

The Bausch and Lomb-Zeiss stereo-bimocular glasses are strong aspirants for favor. The very large field shown, as well as their super-excellent powers of magnifying, make them without a peer in their line.

Bird Studies with a Camera.

"Bird Studies with a Camera," by Frank M. Chapman, is a book which will be thoroughly enjoyed by all students and lovers of birds. The chapters devoted to the outfit and methods employed by the camera hunter, to procure the best results, are very full and the directions are clearly stated.

His descriptions of the habits of some of our common birds, and of the largest bird colonies of Eastern North America, are as interesting as they are instructive.

There are over 100 illustrations from photographs, and the book is a thorough and practical guide for the camera hunter, as well as a delightful one for those who cannot take their pleasure in the field. Published by D. Appleton & Co., New York.

Motto—"THE BEST."

GURD'S GINGER ALE
SODA WATER
APPLE NECTAR

ETC., ETC

To be obtained from all first-class grocers. Please see that the label is on the bottle.

CHARLES GURD & CO., - - MONTREAL

DRINK ONLY.....

Mitchell's

Scotch & &

Whiskeys

THEY ARE PURE, MATURE, AND MELLOW WITH AGE.

The most popular brand in Great Britain..... **Try Them**

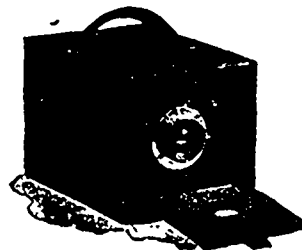
FOR YACHTS, STEAMSHIPS, BOATS
AND CANOES
USE
Mc CASKILL DOUGALL & CO'S
Standard Boat & Spar Varnishes.
MONTREAL.

Kodaks

PREMOS
VIVES

\$12.00 PREMO.
FOR \$7.00.....

SPECIAL FOR 1 WEEK



Montreal
Photographic
Supply

R. F. SMITH
1756 Notre Dame St.

UPTOWN BRANCH
148 Peel Street
MONTREAL
CANADA

CANOE TRIPS 1900

IN

Northern Ontario
and Quebec



Mattawabika Falls

Near Lady Evelyn Lake, reached via Lake Temiskaming

Write for full particulars

GENERAL PASSENGER DEPARTMENT
Canadian Pacific Railway
MONTREAL, QUE.

Finest Canoe Trips in North America
including Temagaming, Desbarats,
Abittibi.



MOOSE
CARIBOU
DEER
BIG HORN
BEAR
DUCK
PARTRIDGE
QUAIL
GEESE
TROUT
BLACK BASS
SALMON

SPORT!!



There is more Sport to the Square
Mile in Canada along the line of the

Canadian Pacific Railway

than in any other part of the North
American Continent

Send for copy of our Game Map, our Fishing and Shooting and other
sporting publications, to General Passenger Department, Montreal, P. Q.

The Finest Canoe Trip In the World

Sportsmen requiring Guides, Canoes and Supplies, etc., for Lakes Temiskaming and Temagaming should write to F. A. CORNHOLD, Malleybury, Ont. (successor to C. C. Farr & Cornhold.)



FLY FISHING

We have the finest assortment of Trout Tackle ever shown in this province.

Hooks, Flies, Casts, etc.; also Salmon Tackle.

The Wightman Sporting Goods Co.,
403 ST. PAUL ST.

HUDSONS BAY COMPANY



INCORPORATED AD. 1670

THE HUDSON'S BAY COMPANY

HAS HAD OVER 229 YEARS EXPERIENCE IN PROVIDING FOR HUNTERS....

EVERYTHING NECESSARY CAN BE SUPPLIED. CIRCULAR LETTERS OF CREDIT ISSUED ON ALL THE COMPANY'S INLAND POSTS. FURTHER PARTICULARS ON APPLICATION TO

HUDSON'S BAY COMPANY, WINNIPEG.

SEND FOR OUR CATALOGUE OF



CAMP GOODS, CANOES, SKIFFS, SAILS, CANVAS, ROPE, BOAT FITTINGS, CAMP FURNITURE.

The "Sonne" Awning, Tent and Tarpaulin Co.,
775 CRAIG STREET
Montreal
QUEBEC

Fishing Rods!

A fine lot just received straight from factory. Low prices... FISHING TACKLE of every description. HAMMOCKS, etc.

L. J. A. SURVEYER

6 ST. LAWRENCE MAIN STREET.

Province of Quebec The Sportsman's Paradise

These rivers and lakes are all well stocked with salmon and trout, from four to eight pounds, and with various other kinds of fish.

MOOSE, CARIBOU AND RED DEER.—Splendid shooting almost everywhere throughout the territory of the Province of Quebec, especially in the Ottawa and Pontiac Districts, in Gaspesia and Beauce, the Metapedia Valley, the Teni-saranguie Region, the Eastern Townships, the North of Montreal, the Kippawa and the Lake St. John District. Game abounds in the Forests and on the Beaches.

Hunting territories from 10 to 400 square miles, at \$1.00 per square mile and upwards, can be leased, on which the lessee has the exclusive right of hunting.

THE LAURENTIDES NATIONAL PARK alone contains hundreds of the most picturesque lakes, teeming with fish, and plenty of moose, caribou and bear; black, silver and red fox, otter, martin, lynx, mink, fisher are also abundant.

FEATHERED GAME.—Canadian goose, duck, woodcock, snipe, partridge, plover, etc., are in great number in almost every part of the province.

HUNTING AND FISHING PERMITS can be obtained from the Department of Lands, Forests and Fisheries and from the Game-wardens all over the province.

Hunting Territories Can be leased by applying to

THE COMMISSIONER OF
LANDS, FORESTS AND FISHERIES, QUEBEC

GAME AND FISH...

TO LET
Rivers, Lakes
and Hunting
Territories

Hunting permits, fee: \$25.00.
Fishing permits, fee: \$10.00.