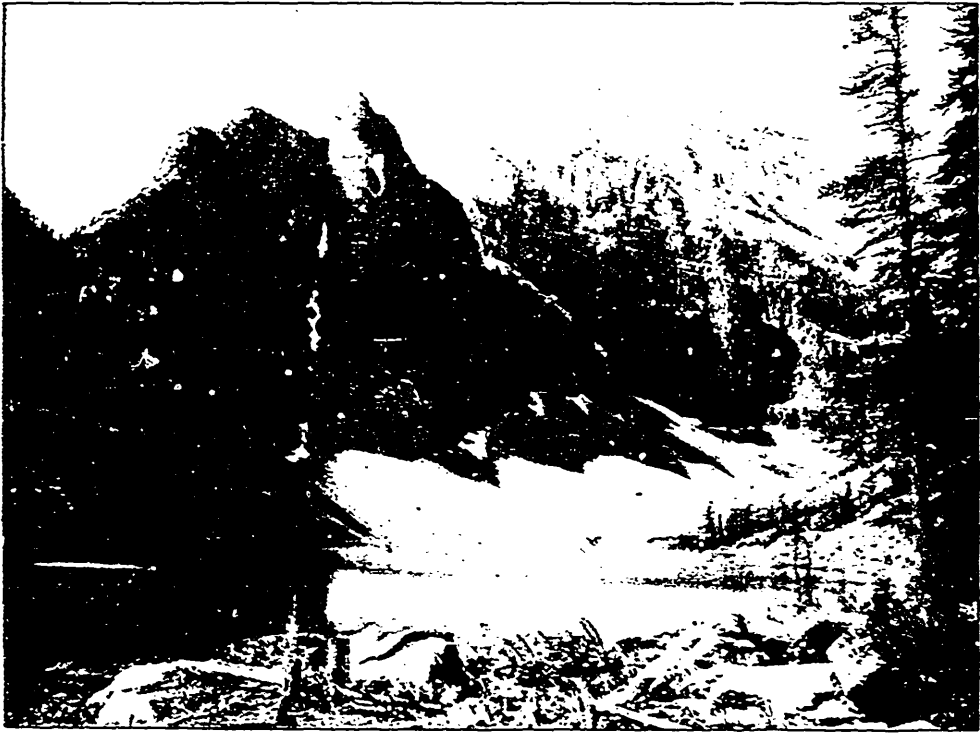


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ROD AND GUN IN CANADA

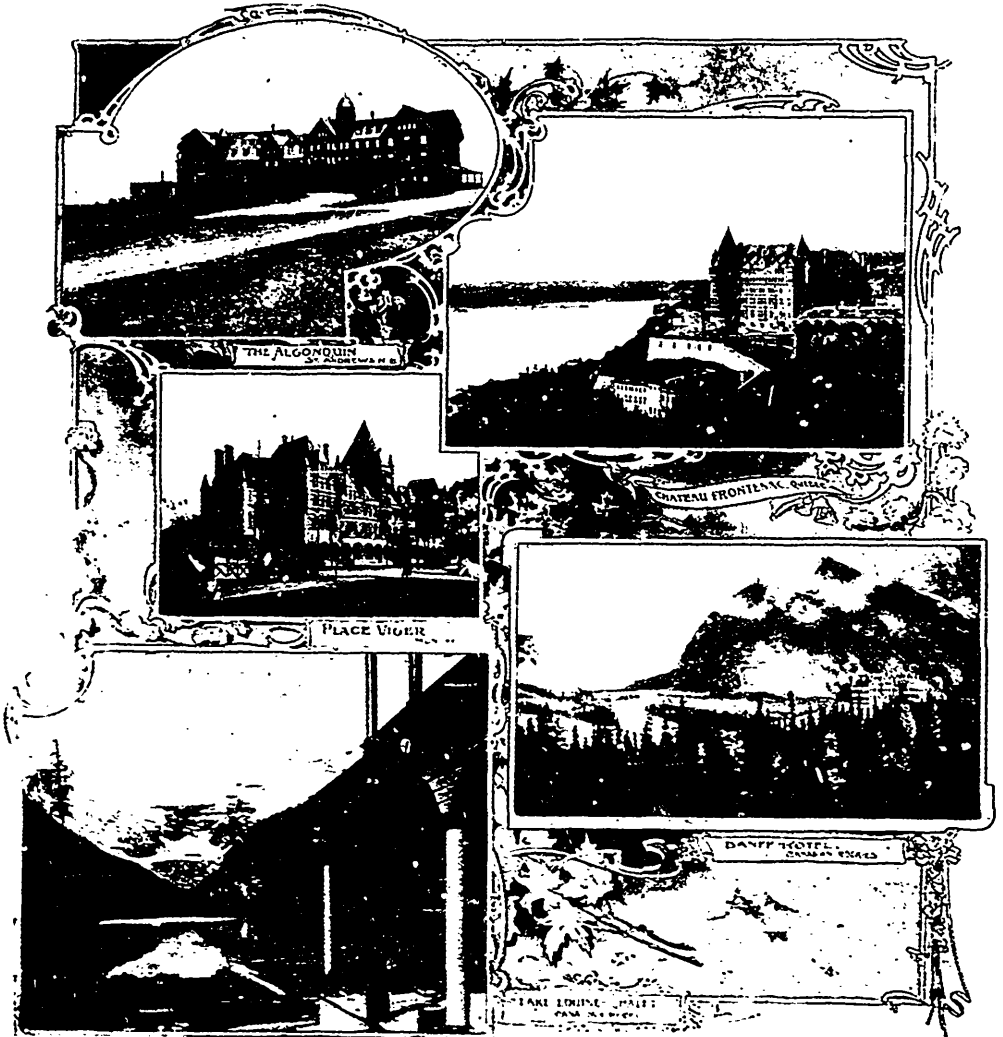


In the Rockies

**A MAGAZINE
OF CANADIAN SPORT
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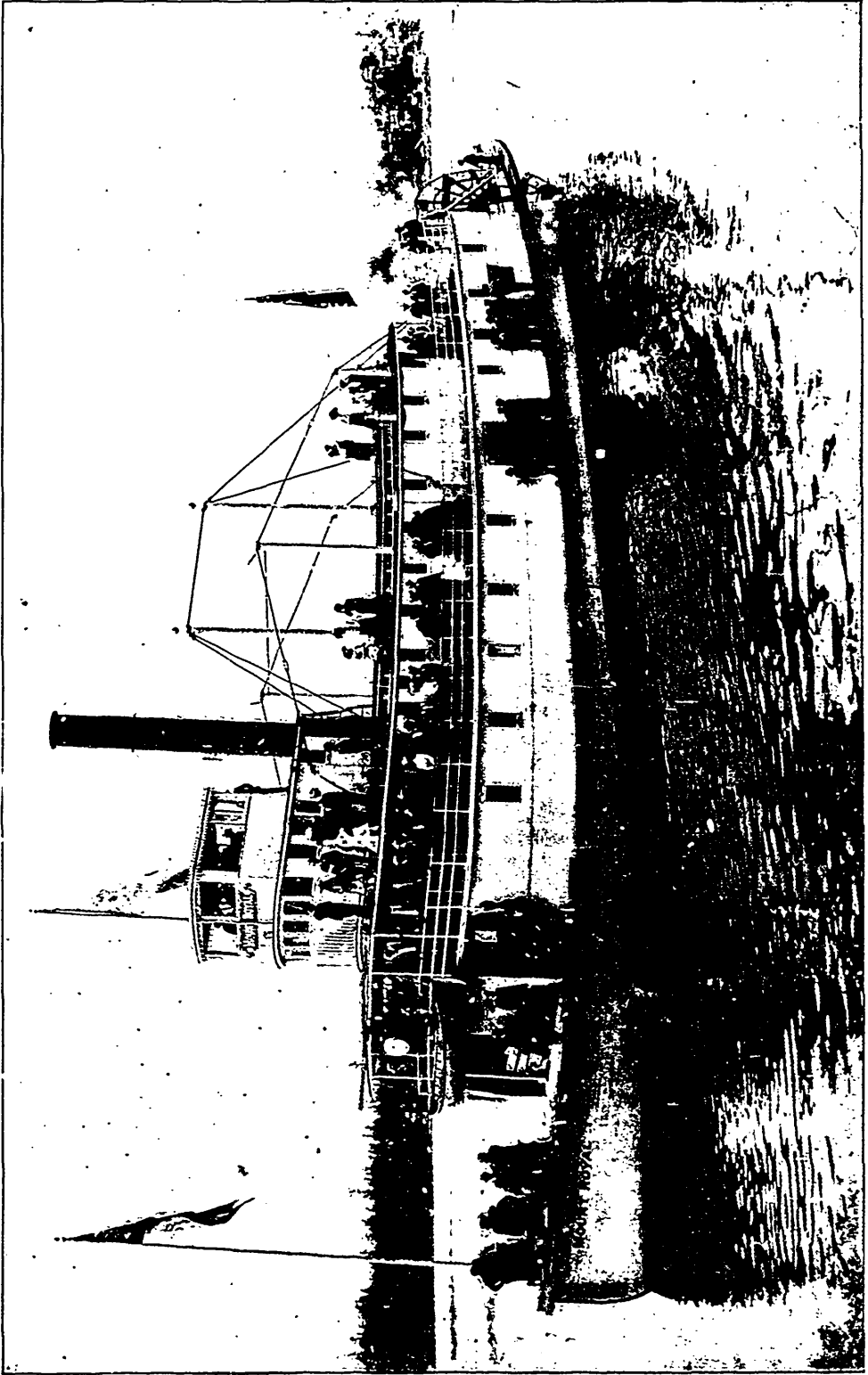
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The crick: River Steamer of the Hudson's Bay Company, plying on the Skeena and Stikine Rivers

ROD AND GUN IN CANADA

VOL. V.

MONTREAL AND TORONTO, AUGUST, 1903

No. 3

The Company.

BY EGBERT OWEN.

In the latter part of the sixteenth century, the close of the mediæval ages, there came rumours, brought by adventurous men to England, that far, far away, across mighty oceans and vast continents, there were Eldorados undreamt of, great stores of gold and precious stones, with no obstacle to acquisition. It was whispered that these regions were of surpassing beauty, and afforded luxuriant ease to the weary and hopeless traveller. The imagination of England was set on fire; the grim barriers of the mediæval restrictions on mind and thought were swept away, and from the noble inspiration of freedom and the longing for something new, the seamen of England went forth to brave the perils of the unknown seas. It was this individual effort on the part of England's seamen and merchant adventurers which was destined to prove of such momentous import and to raise the little sagirt island into one of the mightiest empires the sun has ever shone on. When Charles II, in 1670, granted a charter to Prince Rupert and many of England's prominent nobility to trade in Rupert's Land—which comprised all the land on the shores of Hudson's Bay—and to fish in all the rivers which flowed into the Bay, he could have had no idea of the great future before the Company. Then it was an adventure, an exploitation; to-day it is the greatest trading corporation in the world. For over two centuries, marked by a history

which is always interesting, sometimes romantic, the Company has carried on its trade and extended its outposts into the wilds of the great and gloomy North. And as to write of the Company is to chronicle a portion of the history of the Dominion, a few facts about this great corporation will be of interest to all those who take an active interest in the progression of Canada. It is not drifting into the use of exaggerated language to say that the Hudson's Bay Company is still the greatest of its kind in the world. When we state that its business ramifications extend from the forty-ninth parallel to the farthest limits of the Frozen North we can obtain some faint idea of the vastness of its scope and the extensiveness of its trading ground. And although the ever advancing tide of civilization has accustomed us to those business concerns which cannot be described otherwise than as gigantic, it has still to be discovered whether the Hudson's Bay Company has found a serious rival to the supremacy of its mercantile trade.

But while its efforts are directed mainly to the extension of its fur trade, the Company has found time to establish and maintain a large milling business at Prince Albert, Winnipeg, and Vermilion in the Peace River Valley. Winnipeg—the city of the future—is the headquarters of its mercantile business, while it has branches established at places too

numerous to mention. It has also steamers which carry its freight from York Factory to England, and many which do the Company's business on the great northern rivers of Canada. It is of interest to mention some of the names which were given to some of the most northern outposts of the Company, and if one may be allowed to indulge in inference we may gather that such names as "Providence," "Reliance," "Resolution," "Enterprise," "Good Hope," and "Confidence," are but typical of the character of the men who came out to conquer the northern giant and wrest from him his long hidden hoard. While, as the Athenians, Europeans are continually searching for some new thing, some novelty, it is good to know that many of the traditional observances of the Company have not been abolished but still prevail. For instance: every Sunday the plain white pennant of the Company, bearing the crest "Pro pelle cutem," floats at each post, as if in notification of the passing of another week.

In the old days the Company's service was most rigorous, and its discipline exemplary. The men who entered it entered it for their lifetime, and as they were constantly in danger of attack from

the natives it was absolutely necessary that its organization should be semi-military and that the strictest vigilance should be maintained. Their forts enclosed by strong barricades and watched by sentinels at night, little chance was afforded to the Indians for surprise and massacre.

Fort Chimo and Fort George, on Ungava Bay, may be cited as excellent illustrations of the Company's methods of trade and of the life which the isolated traders lived. Isolated from their fellowmen and still beyond the pale of European civilization, a dozen log buildings, without any semblance of plan in their arrangement, afford shelter to the small population, which is made up exclusively of the servants of the Company, many of whom have taken wives from the neighboring tribes of Eskimo. These stations do a great trade in furs taken from the surrounding country, in white whale, reindeer and salmon, besides exporting in large quantities porpoise and seal oil. As is generally known, the Governor of the Company is Lord Strathcona and Mount Royal, who himself was a trader in the Company's service in the days when Canada was supposed to be but an appendage to the ice-bound north.



Fishing in Ontario.

BY L. O. A.

Early in June I took a flying trip between Toronto and Montreal looking for fishing and hunting grounds. I found several promising trout ponds and brooks, and some good bass and salmon-trout lakes. Sharbot Lake, on the Canadian Pacific & Pembroke Railways seemed, however, to be the best, and I registered a vow that I would return and see that country and the lake district to the north. To fulfil this vow I left Montreal alone, because everybody I met knew of some better place for their fishing.

My destination was Sharbot Lake, but I thought I would jump off at Smiths

Falls and try the Rideau River and lakes for bass. I arrived at Smiths Falls at 1.00 p.m., and the 'bus took me to the Arlington Hotel, which gave me good value at \$1.00 per day, but, personally, I was better suited at the Rideau Hotel at a higher figure. I went to church in the morning and drove to some nearby fishing places in the afternoon.

My driver was a modest, intelligent fellow, who knew something about fishing. He told me that at Otter Lake, seven miles from the station at Smiths Falls, and one of the best bass lakes in Canada, he had discovered that the loon, or northern diver, was one of the bass'

worst enemies. "I shot one of these," he said, "and hung it at the house so low that the cat got at it and ate its neck off, when there fell out of its crop about a quart of young bass about an inch long. Since then," he continued, "I have shot all the loons I could, and I find them easy to shoot if two get at them. One goes to one side of the loon and waves a red pocket handkerchief or a looking glass. The loon is very inquisitive and watches nothing but the red handkerchief. 'Then the man with the gun gets in his work easily."

"I tell you another thing," said my driver, "the Ontario Government ought to give a bounty on ling, say ten dollars a ton. This would make fair wages for a man who would catch them and feed them to the pigs. The ling destroys other fish, especially pickerel. The eel destroys the ling, but will not molest bass, perch or pickerel at all, or at least not to the same extent."

I did not find Arthur Jones, who was absent, but his brother, the lockmaster, proved to be a very good substitute. In an hour's trip with him we put eight good fish into our creels and threw away about four. Among our piscatorial victims were bass, pickerel, shiners and sun fish. It was a pleasant little outing, and I can cheerfully recommend the Jones Bros. and their boats at Smiths Falls, also the fishing.

I arrived at the hotel at Sharbot Lake at 2.30 a.m., and found a room clean and comfortable enough, always remembering the price paid. This is one of the hotels which charges one dollar per day and gives you one dollar's worth every day. It will be, I think, a pardonable digression on my part, in which I urge upon people who need a rest to try a season of good but plain, very plain, food. In very many cases indeed mental fatigue exists in closest sympathy with stomach overwork. These are almost inseparable. In fact the great good that comes from sojourning at the small lake shore and "in the woods" resorts is traceable many times quite as much to plain food as to the exercise and air.

At Sharbot Lake I found as usual several bass and salmon-trout fishermen. I wanted to get brook-trout, however, and one needs to go a little north for

them. I took the Kingston & Pembroke Ry. to Clarendon Station, as it was Monday. On Tuesdays the drive is shorter by going to Lavant Station. Stages leave Clarendon on Mondays, Wednesdays and Fridays for Plevna, and on Tuesdays, Thursdays and Saturdays they leave Lavant for the same place.

We had a good clean meal at Mrs. Leishman's at Clarendon, after which a pair of good horses brought us past Crutch Lake, Gul! Lake and several others, across the Mississippi system of rivers and lakes, all of which were tempting, but we were going north to the trout lakes and we resisted the temptation. There are, however, in this country many large lakes well stocked with bass, salmon-trout and red trout, and some smaller lakes and streams with brook-trout, to be reached by stage from Clarendon or Lavant on the Kingston & Pembroke Ry. These lakes are in the Park and Forest Reserve of the Ontario Government. We reached Plevna in time for a late supper, as the country people call the dinner hour of city people. Here, as at Clarendon, we had clean beds and wholesome meals. If I felt like criticising at all I should say that the bread was not quite as good as the Clarendon bread, and that the tea was made too long before serving. We are not grumbling, as we were two hours late for supper and we deserved it. We mention it for an educational purpose. So few people know how injurious it is to drink tea that has been made too long. All tea should be drunk within twenty minutes after it has been made. Next morning we had a good breakfast, with tender beef and good tea, and I hired a team to go to some lakes that I had long heard about and wished to know.

A drive that seemed ten miles going and five coming back was really about five and a half miles long. The road was not as rough as some I had met with, but it was quite a climb.

I called on a gentleman, whose name I have forgotten, whom I found to be a good hunter and a spring and fall fisherman for the salmon-trout, land-locked salmon and brook trout. He did not think he had time to fish in the summer; and the excellent farms cleaned up of forbidding territory, from the farmer's

point of view, prove his opinion to be correct.

Here is a fisherman's mecca for May and September, and just the country the hunter wants for the fall deer shooting. The summer fishing is not as good as at Sharbot Lake, and in many of the lakes thereabouts, because these upper lakes have nothing but trout in them, and trout of all kinds are unreliable biters in the mid-summer months. Nevertheless the Schooner, Mackeys, Brule, Rock and Bear Lakes, and a small stream whose name I did not get, are as good trout

lakes as the best that I have been fortunate enough to visit

This is a country which will suit old men and novices in shooting and fishing. There is no hardship in getting there and very little walking, as compared with other countries, when you get there. Sharbot Lake is 166 miles from Montreal, about the same from Toronto, and only 47 from Kingston, and 67 from Brockville. The area of the lake country is so great and the laws for protection of the fishing so good that the fishing will improve in the near future.



The Horse.

BY C. J. ALLOWAY.

It requires but a superficial study of the factors of human pleasure and happiness to find that of all mediums for their promotion, the horse, without dispute, stands pre-eminent.

In all the great events of history, its battles, triumphs, pageants, crownings and gallantry, he has ever been an integral part. His form has been deemed the most fitting to bear its kings and chivalry, and in painting and sculpture he is found to add to the dignity of pose and grace of posture to every man, be he prince or knight.

Of the deeds of valor which stand out as finger posts on the beaten road of time, there are few that have not been wrought to the ring of his gallant hoofs, of which the mad fury of the charge at Waterloo and the six hundred at the Crimea are but samples.

He is indissolubly connected with some of the most touching human experiences. What can compare with the pathos of the war-horse, with empty saddle, stepping to the weird, soul-rending strains of the funeral march, as he follows the gun-carriage on which lies his master with sword and helmet resting on the drooping colors.

Many a stern man has found his cheek wet with tears at the sight of an old four-footed warrior, perhaps fallen to

the rank of a hack drudge, pricking up his ears, with a gleam of the old war spirit in his eye, as he catches the strains of fife and drum in an old military march, or the bugle sounding "Boots and Saddles."

Few pictures in history, as the centuries have rolled by, are so dramatic as the imperial Roman, Valerian, bending his proud head that his conqueror, Sapor, the Persian, might mount his horse by placing his foot upon his royal captive's neck, and whose heart he thus brake.

Time may bring fortune and success, social and financial, to the man who seeks them; he may have fame and a name among men, but none of these can bring the throb to his heart that was his in the springtimes and summers of his boyhood, when his bare feet brushed the dew from the fragrant clover of the old snake-fence pasture where the farm horses nibbled in the sweet, blue dawns. He may ride the swiftest pace in his costly automobile, with the milestones flying past, but the memory of the scramble up on the old mare, the gallop bare back, with the morning air blowing over his innocent, boyish face, is among his purest joys, and the scent of clover, to his latest day, brings it all back with a sweet, sad pain.

It is not only in the strenuous and poetic phases of life that the noble form of the horse stands as the comrade of man. In all the industrial, peaceful and pastoral avocations he is the central figure. The plow as it furrows the glebe, if propelled by steam or electricity, would be shorn of most of its picturesque-ness. In the "Harvest Home," as the loaded wain returns with the golden grain, and he carries it to crown the russet stack or rick, his patient toil gives life and homely vigor to the scene.

To speak of shutting out the horse from our mercantile, domestic or industrial life is to deprive us of something upon which human affection has too long been centred to admit of even its consideration.

While it is true that modern methods have somewhat circumscribed his field of action, it is not to be deplored that he no longer must step the dreary treadmill to turn the threshing machine, as was his lot in days gone by,—most of the burden-bearing of life is no longer laid upon his willing shoulders,—but it in no wise follows that he is eliminated entirely from economics.

There was a time when the ordinary farmer with two horses considered himself amply furnished for his husbanding operations, but with the great wheat growing development of Western Canada, the almost fabulous tales of single fields as large as an eastern township, the gang-plows, double harrows, binders, harvesters, and all the other wonders of agriculture in that region, the horse is the great and indispensable adjunct to the mammoth operations. His breeding and culture should be considered of prime importance by every farmer who is alive to the situation and the rapid

development all around him. Those who are enriching and improving their stock by investing in the best strains of draught horses and roadsters, are making hostages to fortune, and showing a forethought and foresight of which time will show the wisdom.

It is time that the colonies, and especially Canada, in which we are most directly interested, should see to it that Government measures are taken to place us on a par with older countries across the ocean,—with England, where the improvement of the horse has for centuries been a close study and field for experiment and investigation, as shown in almost all breeds, from the great Clyde to the toy Shetland.

France has long been noted for its heavy draught and coach horses, and now Russia is advancing rapidly in this direction, as evidenced by recent importations to this country.

Prussia is a horse-loving country, following the example of the royal house of Hohenzollern, whose members are so frequently represented pictorially on horseback. This is equally true of other reigning families of Europe, the hunting fields of England and Ireland having seen few finer horsewomen than the late lamented Empress of Austria, and not many acts of our late Queen excited more enthusiastic admiration among her subjects than when still a maiden, in her habit of scarlet, she reviewed the troops of her kingdom, the defenders of her throne and sovereignty.

To sum up, it is imperative that public attention be aroused to the wonderful climatic adaptability of Canada to the production of a high-class type of horse, and the increasing demand for the marketable article.



Further Exploration.*

BY PROF. J. NORMAN COLLIE, F.R.S.

The exploration of the main range of the Canadian Rocky Mountains lying between the sources of the Athabasca River and the Kicking Horse Pass has been the subject of two papers read by myself before the Royal Geographical Society. In these two papers I attempted to give a description of some of the great snowfields that exist amongst the Rocky Mountains, and also as far as possible to make clear the geography of a mountain district up till that time but little known.

Of course, during the short visits that I was able to make, many points of interest could not be answered, for panoramic views obtained from the tops of the snow-peaks were often interfered with, either by other peaks, cloudy weather, or sometimes smoke-haze. It must also be remembered that the country mapped, as the result of these visits, comprises about 3000 square miles; therefore it is not to be wondered at that there were a very considerable number of valleys whose sources were difficult to trace, glaciers and snowfields the direction of whose flow was problematical, and lastly, the altitudes of some of the highest peaks were doubtful. It was to solve many of these uncertainties that last summer I again returned to the Rocky Mountains. I wished to discover, (1) what system of valleys lay on the south-west side of the Freshfield range; (2) to traverse the great Lyell snowfield, upon whose ice probably no human foot had yet trod, in order to learn about the complicated series of snow-peaks in that district; (3) to find out how the continental divide ran, and how also the various creeks of the Bush River were connected with the Lyell snowfield; lastly, I had a suspicion that there ought to be an easy pass across the watershed between Mount Forbes and the Freshfield group of mountains. A new pass in this particular spot would be of much interest, for from the knowledge gained in former

expeditions there did not seem, except at this spot, to be a possibility of any other undiscovered low pass existing from Fortress Lake Pass on the Athabasca to the Kicking Horse Pass on the railway line. Moreover, should the pass exist, it would be useful as a means of reaching the headwaters of the south fork of the Bush Valley without the terribly hard work of forcing a way from the Columbia River on the west through the dense forests of the Bush Valley up to the main range. These forests in 1900 had effectually stopped our expedition to the Columbia group of mountains, and we were forced to return without having reached even the head of the Bush Valley. These, therefore, were some of the more important questions that I hoped to be able to answer before I returned to England last autumn.

The members of our party were four—H. E. M. Stutfield, H. Woolley, G. M. Weed (of Boston), and myself. Charles S. Thompson, of Dallas, Texas, one of the most enthusiastic climbers and explorers of these Canadian Rocky Mountains, was also to have joined us, but just before starting from Laggan he was unfortunately recalled to Dallas by a telegram informing him that a large portion of the town had been destroyed by fire, including his home; he had therefore perforce to leave the cool breezes and beautiful scenery of the wooded valleys of the Rockies and return to the blazing heat of a Texan summer. In every expedition that I had made before in the Rockies our provisions had been a source of trouble to us; usually at the end of three weeks or so they had begun to give out. This time I was determined that we should not suffer as we had done formerly. I therefore asked our head man, Fred Stephens, who supplied us with horses and food, to start in at least three weeks before us with about 1000 lbs. of necessaries—flour, bacon, condensed milk, etc.—to take

* A paper read before the Royal Geographical Society, Feb. 23, 1903.

them as far as Bear Creek on the Saskatchewan, and there make a "cache." He was then to return with the horses and meet us at Laggan. This would not only enable us to bring in extra food with us, but the trail as far as the Saskatchewan would be cut—no inconsiderable gain, for the Bear Creek "cache" was at least 60 to 70 miles from the railway.

On July 24 we started from Laggan. Besides ourselves there was a Swiss guide, Hans Kaufmann, whom we had engaged from the Canadian Pacific Railway Co., whilst Fred Stephens had brought with him three men, J. Robson to cook, Clarence Murray to help with the horses, and Dave Tewksbury, a mighty axeman from the lumber camps of Wisconsin. Our journey up the Bow Valley was without incident, if one excepts the usually harassing time spent in fighting with the mosquitoes and "bull-dogs," which latter this summer were in countless thousands. These "bull-dogs," or rather horseflies, were chiefly a nuisance to the horses, preventing them from feeding properly, but they did not annoy us much.

It was not till the 28th that we reached the Saskatchewan at Bear Creek mouth. Here, the horses needing a rest, an off day was spent in visiting Mount Murchison, chiefly with the object of seeing again some curious fossil remains that I had discovered in 1898. Finding ourselves, however, on a wrong ridge, we decided instead to climb to the summit of it in order to obtain more knowledge of the group of peaks that constitute Mount Murchison. The ridge seemed endless, but at last, after climbing up some steep snow-slopes and along a narrow arête, we emerged on to the top, which, to our surprise, was the top of Murchison itself. This unexpected result was of considerable value from a topographical point of view, for I was able to see stretched out before me several minor valleys amongst the hills whose existence I was till then quite unaware of. The height of Murchison had been estimated by Dr. Hector to be about 13,500 feet, and he mentions that the Indians said that it was the highest mountain they knew of. Later in another map its height is given as 15,789

feet. A Watkin barometer, kindly lent me by the Geographical Society, made it only 11,100 feet, and as this aneroid agreed during the whole journey with a mercurial barometer I had with me, I take its number as correct.

Geologically, Murchison is most interesting. Not only had I found the curious fossil remains on it in 1898, but it, together with Wilson, a little further north, constitute the two sides of a gigantic gateway to the hills through which the Saskatchewan turns to the east. The dip of the limestone strata on both these mountains differs in a marked manner from most of the neighboring peaks, being towards the east. As a result, there are tremendous precipices on the wrong side of the mountain, namely, the western side. In almost every other mountain it is the eastern side that is sheer, with sloping shoulders towards the west and south-west.

Leaving Bear Creek the next day, we made our way up the middle fork of the Saskatchewan along the level bottom of the valley, our goal being the Freshfield group of mountains. On the 31st, in wet weather, we finally camped on the same spot where five years before Baker and I had pitched our tents. This spot was at the head of the "washout" where the glacial waters from the Freshfield snowfields meet those that came down from Forbes. The Rev. J. Outram, who had been mountaineering further north, now joined us, with a Swiss guide, C. Kaufmann, in order to attempt with us the ascent of Forbes and Freshfield. It was not, however, till the 2nd that we were able to get the horses with our camp outfit up to the foot of the Freshfield glacier, and not till the 4th that the weather would allow of the ascent being made. Our party was a big one, but as there were two Swiss guides, we were able to split it into two, each party being led by one of the Kaufmanns. Just as with Baker and Sarbach five years previously, we started in the early hours of the morning. The glacier seemed to be exactly the same as we had left it, with the sole exception of a series of huge blocks of rock that had moved slightly down the glacier. Robson accompanied us to the head of the glacier, but it was with some

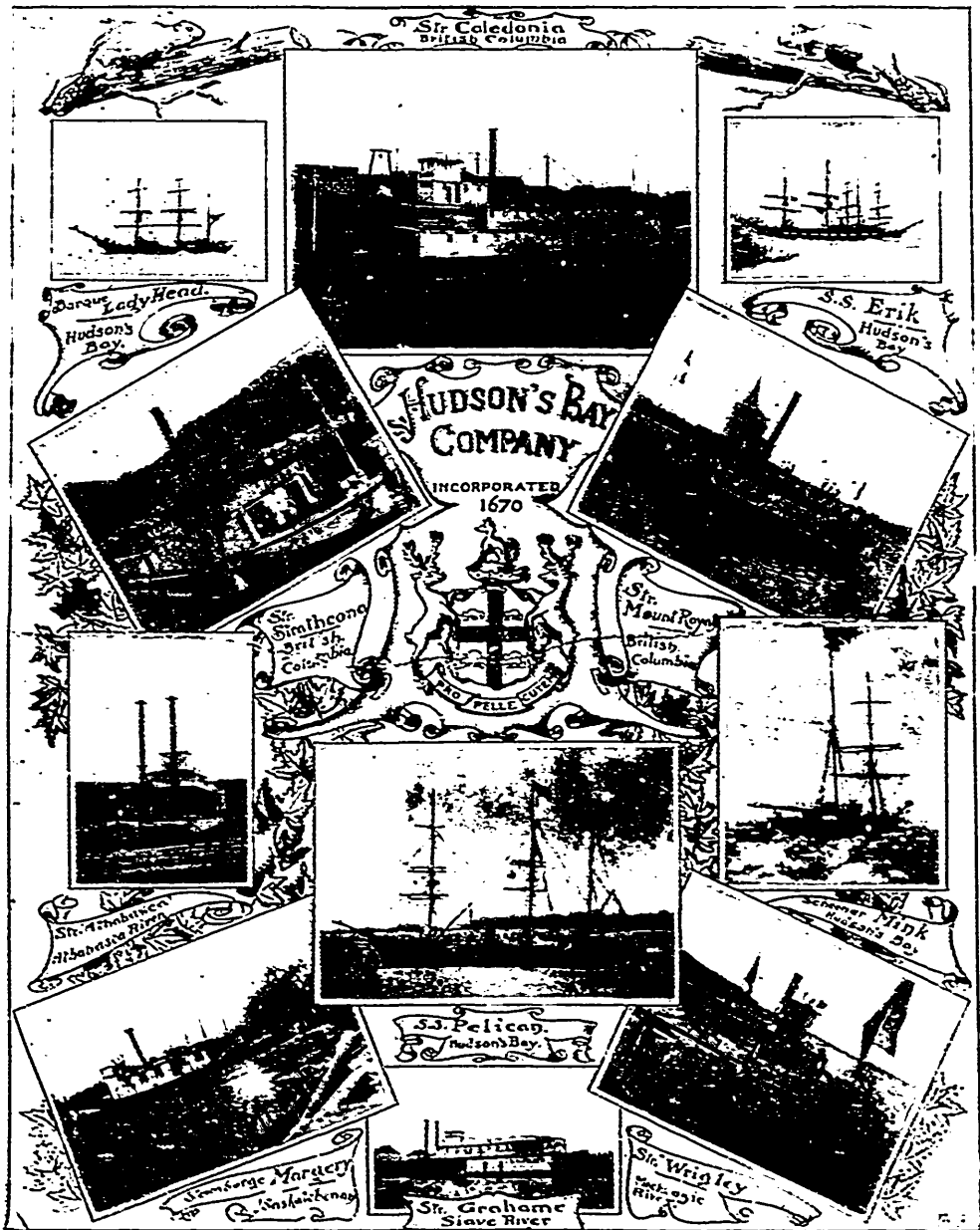
misgiving when we parted company that I saw him start back to the camp alone, for there were so many deep crevasses that still held at their mouths the unmelted snow of the winter, and which were dangerous to any one who might be unaware of the insecure nature of such snow-bridges. However, on our return in the evening, we found that he had returned safely from this his first glacier expedition. Following the same route as Sarbach had taken Baker and myself, we rapidly climbed upwards, and I was naturally anxious that the day should remain fine, for once at the top of Freshfield, I should be able to see that part of the country which lay beyond on the western side, and which on my map was blank; also the complicated geography of the south branch of the Bush Valley would be capable of being followed for the first time, and lastly, the question whether a low pass existed between the Lyell and Freshfield systems of ice-fields could be answered. Long before we arrived on the final arête of Freshfield this last question was settled, and it was with much satisfaction, as we mounted higher and higher, that I could follow how the valley that lay on the south side of Forbes took a bend to the south-west, joining a similar depression running north-east from the southern fork of the Bush Valley. The pass therefore existed, as I had always hoped it would, ever since when in 1897 I had penetrated into this lonely mountain land with Baker and Sarbach.

Towards the top of the mountain several difficult faces of rock and thin rocky edges had to be surmounted, but H. Kaufmann, who was leading, never seemed to be in any way anxious about our final success: ultimately we reached the summit, 10,900 feet, which consisted of snow, and was like most of the summits we ascended, heavily corniced with snow. The weather was perfect, and at our feet lay the unknown country, every valley plain; glaciers and streams sparkled in the sunshine, and, as I had more or less imagined from glimpses through the murky atmosphere of the Bush Valley in 1900, directly to the west was the glacier which fed the south fork of the Bush River. To the

north were all our old friends of 1898—Columbia, and Athabasca Peak, Alberta, with the Twins straight in front, appearing to be part of it, the Dome, Lyell, Saskatchewan, and many more; to the west the Bush Peak and the far-off Selkirk Range beyond the Columbia River. Nearer to us on the south lay Pilkington, Walker, and Mummery. There is a great pleasure in standing on a high mountain in a country but imperfectly known, so many uncertainties vanish in a moment, often with the remark, "I thought so," whilst masses of new possibilities and further queries take their place. One of these queries which could not be answered was the height of a splendid pyramid of snow gleaming far away in the Selkirks. This peak we had seen day after day in 1900 from the Bush Valley; now from a still greater distance it seemed even greater in height, but what that may be must still remain unanswered. On the next day we returned to the "washout," near where the streams from Forbes and Freshfield meet.

In order to get our camp moved up to the foot of Forbes, it was necessary to cut a trail through the woods, and whilst this was being done we spent a delightful summer's day climbing on to the alp that lies on the east and north-east of Forbes. This alp is the largest that I know of south of Wilcox Pass. In the early summer it must be carpeted with flowers, and even in August there were many still left in bloom, whilst the remains of numberless others could still be seen. This spot also seemed to be a favorite haunt of the mountain goat, for on emerging from the woods below on to the almost flat upper pasturage, large numbers of goats could be seen grazing in small groups, and over fifty head were counted. Soon, however, having caught sight of us, they moved off towards the precipitous faces of the hills that overlook the Saskatchewan on the east. That this country is much frequented by goat was again noticed just below Glacier Lake, where, a log-jam having occurred across the river, forming a natural bridge, a large and newly worn goat-track was found leading down to this bridge on both sides of the river.

(To be continued)



THE H. B. C. FLEET.

These boats serve a territory almost as large as the United States.



READY FOR THE TRAIL.

Hudson's Bay Company's Dog Teams at Lower Fort Garry, Manitoba, bound north.

The Airedale Terrier.

BY D. TAYLOR.

Among dogs which have taken the public fancy in recent years is the Airedale Terrier, the largest of the terrier breed yet produced. For the past fifty years it has been known in England, where it was variously called the Bingley and Waterside, but owing to its popularity in the Valley of the Aire, in Yorkshire, it was decided to acknowledge it as a distinct variety, and it was given the name which it now bears. The Airedale was first introduced into the United States in the spring of 1897 by Mr. Mallorie—a well-known English breeder who migrated to Maryland, taking some of his dogs with him—and classes were made for the breed at the Westminster Kennel Club's Show, New York, in February, 1898. In 1899, Mr. Joseph A. Laurin, of Montreal, who was then vice-president of the Canadian Kennel Club and a keen sportsman and dog fancier, associated himself with Mr. Mallorie to introduce the breed into Canada, classes being provided at all the shows in the Dominion held under C.K.C. rules. It was not, however, until December, 1900, that Mr. Laurin became actively interested in the breeding of these terriers. From these dates the Airedale has gained perceptibly in public favor and record prices for the breed—up to \$3,000—have been paid on several occasions, nearly \$7,000 being paid for four imported to this country in 1901. As an illustration of the gain in popularity the Airedale has made in a few years it may be mentioned that while in 1897 only two of the breed were registered with the American Kennel Club the number had mounted up to ninety-six in 1901, and of these Mr. Laurin's terriers were accountable for fifty-nine.

The Airedale is adaptable to almost every kind of sport. He is a natural hunter, has a keen nose and is easily broken to the gun. He will do all the work of a spaniel and can be taught to drive cattle like a collie. A capital

water dog, he is to be seen at his best when hunting along the banks of a river, as his dense, wiry jacket enables him to withstand the effect of water, and, being such a big dog, he is more than a match for any sort of vermin he may fall across. No hole is too deep for him to follow his quarry; to muskrats, water rats and other amphibious vermin he is sure death and will work indefatigably for hours until the object of his search is attained. In England, where his merits are best known and appreciated, the Airedale is taught to retrieve duck, geese and sea fowl, no sea, in fact, being too rough for him when in pursuit of the latter. On land, also, he is a first-rate workman, and being very rapid in movement will kill rats quicker than one can wink. Rabbits he will hunt with the zeal of a beagle and may be easily broken to the gun for feathered game. If a badger is to be "induced" to come out of his box, the Airedale either brings him out or is a dead dog. He may be truthfully termed an all-round sporting dog, and besides is an exceeding lively and pleasant companion.

In point of disposition the Airedale possesses all the qualities that make him peculiarly fitted for a house dog. He is docile in the extreme, fond of children, and a good watch. He is far from quarrelsome with other dogs, indeed will almost shun them when at walk; at the same time he is at all times ready and able to act his part should another dog dispute his right to advance. In many other respects the Airedale has found favor with dog lovers, and one recommendation should not go unnoticed, that is his hardy constitution, which causes little trouble to breeders during the early stages of puppyhood. In this respect he certainly compares favorably with many other varieties.

The standard adopted by the South of England Airedale Terrier Club should show a dog with a long flat skull, but not too broad between the ears, narrow-

ing slightly to the eyes; stop hardly visible and cheeks free from fulness; jaw deep and powerful; ears V-shaped with carriage, small but not out of proportion to the size of the dog; nose black; eyes small and dark in color; teeth strong and level; neck of moderate length and thickness; shoulders long and sloping well into the back; chest deep but not too broad; back short, strong and straight, ribs well sprung, hindquarters strong and muscular with no drop, tail set on high and carried gaily but not curled over the back; legs perfectly straight with plenty of bone; feet small and round. The weight of the dog should run from forty to forty-five pounds (bitches rather less), and he should have a keen, dare-devil appearance.

The kennels of Mr. Laurin are known as the "Colne Airedale Kennels," the prefix "Colne" being the sole property of that gentleman, registered with the English, American and Canadian Kennel Clubs, and are situated at Petite Cote. The locality is admirably adapted for the purpose of breeding and raising dogs, and the kennels are built on ground that is high and dry, with a wide range of pasture land for exercising or training. At present the kennels contain about fifty dogs, the greater number being brood bitches and some very promising young stock, for which, by the way, there is always a constant demand. At the head of the kennels is Champion Colne Lucky Baldwin, the phenomenal young dog which, after winning extensively in England, was brought to New York in time for the Westminster Kennel Club's show in February last, where he won everything, including the Airedale Terrier Club's challenge shield for best dog and the Westminster Kennel Club's cup for best in show. This trick he repeated at Newark and Boston, becoming a champion of record and thus winning the American Kennel Club's championship medal when only nine months old—a truly wonderful performance. Lucky Baldwin is one of the best Airedales of the present day either in the Old Country or on this continent. His breeding is unapproachable, combining as it does the blood of the two

most famous Airedale champions—Ch. Master Briar and Ch. Rock Salt. He is powerfully built, with any amount of bone and substance, yet without the slightest suspicion of coarseness, and teems with quality, real terrier character and gameness. His head is wonderfully long and lean, with abundance of foreface and exceptionally square, well filled up muzzle. He has good, perfectly carried ears, and coat of nice color and texture. In front he cannot be excelled, fine deep chest, perfectly straight legs and beautifully formed feet. In general outline it would be hard to conceive a better formed dog. After his long sea voyage and short tour of the United States bench shows, Lucky was, naturally, not in the best of shape, but since his arrival at Petite Cote, under the intelligent care of Mr. Alex. Smith ("Auchcairnie") he has got back to his old form. Indeed there is a marked improvement in all the dogs since Mr. Smith took over the kennels, and it is to be hoped that Mr. Laurin's enterprise in securing his services will meet with all the success it deserves. Among the prominent bitches are Ch. Colne Princess Briar, who has the reputation of turning out four winners from one litter; Colne Mistress Fairy, a nice clean cut dog of exceptionally fine quality; Walton Flyaway, Briar Lady, Wilhelmina, Last Request, Mistress, Zaza and others. But why enumerate the good points of these when there is not one poor dog in the kennels? They are all of ultra fashionable breeding, Mr. Laurin having spared no expense in the importation of the best strains of the breed in England. At present he is on a holiday trip to Europe, and should be run across anything in the Airedale line that strikes his fancy no doubt a strong effort will be made to annex it for the Colne Kennels. "Auchcairnie" is now busy licking the dogs into shape for Toronto, and he says that in both sexes, old or young, he can beat anything in Canada or the United States. Visitors are made cordially welcome at the kennels, and it will not be the fault of either Mr. or Mrs. Smith if they leave without experiencing a pleasant afternoon.

A Great Factory.

BY C. A. B.

Last winter I was given an opportunity to see the inside of the factory of the Winchester Repeating Arms Company at New Haven. For years it had been my wish to learn just how those accurate, hard-hitting guns were built, and how it came to pass that each one was true to gauge, and that each one shot accurately and worked smoothly.

For an hour or more I followed my guide—Mr. W. R. Clark—from one department to another, and listened to the words of wisdom that fell from his lips. In the end it left me hungry, weary, slightly bewildered, but happy in the consciousness of newly acquired knowledge.

I found much to interest me,—barrels being bored in one room, actions machined in another, bullets cast in a third, and stocks being fitted in a fourth. In yet other parts of the great works were men shooting, shooting, shooting, as if their very lives depended upon their shots, instead of the accuracy of the sighting of a rifle that would sell for less than a twenty dollar piece.

This plant, covering as it does, in all, some two hundred and thirty-five acres of land, is unquestionably the largest manufacturing establishment of small arms and ammunition in the world. The main plant covers about thirty acres, with at present over twenty acres of floor space, and as the company finds it necessary to make additions continually, it is very probable that in a short time, these figures will need revision. Besides this area mentioned, the water shops, located on Whitney avenue, beside Lake Whitney, the site of the old Whitney Arms works, together with the proving and powder storage grounds, go to make up the acreage given in the first lines of this paragraph.

The present company was organized in the year 1866, just after the close of the Civil War. The personnel of the company was made up of Hon. O. F. Winchester, E. A. Mitchell, John English, J. A. Bishop, and Morris Tyler.

At the time of the formation of this new company, which a short time after its organization was named the Winchester Repeating Arms Company, there were in New Haven three companies manufacturing fire arms: the Volcanic, the New Haven, and the Henry Repeating Arms Company. Of these companies the best known was, perhaps, the Henry. The way in which this company sprang into prominence during the Civil War, is in itself an interesting story, and while it may be somewhat of a divergence to tell it at this point, its value to the remainder of this article will sanction easily its insertion.

In 1863, while the Civil War was still going on, the public was startled and thrilled by an account which appeared in the public prints of the day, of a battle, fought in the southern part of Kentucky, between a band of guerillas, not recognized by the Confederate government, and a single man, a sympathizer with the Federal government, armed with a Henry, sixteen-shot rifle. The Union man was known to have a large amount of money in his house and consequently became an object of interest to marauding bands. This particular band, under the leadership of a noted outlaw, known as "Tinker Dave" Beattie, having learned of the treasure, decided to make away with it. Accordingly, one morning, while the family were at breakfast, announcement was made suddenly by the frightened negroes about the place of the approach of this guerilla band. The planter, immediately seizing his money box and his Henry rifle and cartridges took refuge in a strong block house, which foreseeing such an emergency, he had had constructed, and so situated that it commanded the residence and the stables.

The Henry rifle, which shot the old .44 rim-fire cartridge, was a very accurate arm, and in the hands of the Kentuckian, who was an excellent shot, proved no mean obstacle to the accom-

plishment of the marauders' object. Within a short time the planter had killed eight of the attacking party, and had wounded ten men so severely that "Tinker Dave" was glad to beat a hasty retreat, before the neighbors, who had been informed by the frightened negroes of the attack, could come to the aid of the plucky defender.

Naturally the account of this remarkable fight spread quickly all over the country, and with its spread came a tremendous demand for the Henry rifle, a firearm which made every man a host in himself. A regiment from Indiana, the Seventeenth called Wilder's Mounted Infantry, of the army of the Cumberland, equipped itself with Henry rifles at its own expense and soon became one of the most effective and one of the most feared of Union Regiments.

At the close of the war in 1866, Hon. O. F. Winchester, who was then Lieutenant-Governor of Connecticut, appreciating the merits of this rifle, bought up the patents, improved them in many ways, and organized a company, as previously stated for the manufacture of this arm. Out of compliment to the distinguished gentleman who had founded the company, the new rifle was named the "Winchester." Almost immediately the new company was overwhelmed with orders for their rifle, many of which came from those who were seeking new homes in the far west and desired just such a rifle to protect them from foes, and to kill game for their subsistence.

Such, then, was the founding of a company which should in a few years have acquired a world-wide fame and reputation. In 1869 the Winchester Repeating Arms Company acquired the American Repeating Rifle Company; this purchase included the Spencer Rifle Company, of Boston. The Adirondack Arms Company of Plattsburg, N.Y., was also purchased by the Winchester Company in 1874.

The company began operations first on Union street, but finding very soon that the quarters there were too small for the increasing business, the plant was removed to Bridgeport, and for a short time occupied a part of the premises of the Wheeler and Wilson Company. However, the location was not

as advantageous as could be desired, and the company secured a tract of land on what is now known as Winchester avenue. Here, during the summer and the fall of 1870 the first buildings of the present extensive plant were erected, and in January, 1871, the Winchester Repeating Arms Company moved into its permanent quarters. At the present time it is just completing some extensive additions to its plant.

The present officers of the company are: President, Thomas G. Bennett; vice president and treasurer, G. E. Hodson; assistant treasurer, H. S. Leonard; secretary, A. I. Ward.

Governor Winchester, who was the first president of the company, and whose death occurred in 1880, was also the first man to see the possibilities in a centre fire repeating rifle. While the Henry was the first repeating rifle made, it used rim-fire cartridges, and had also the additional disadvantage of having to displace the magazine in order to fill it. This was remedied in the Winchester by the introduction of a fixed magazine. It was not, however, until 1873 that centre fire cartridges were used. No repeating rifle ever made has had the remarkable success of the Winchester, and, in fact, it may be said without exaggeration that the same statement could be applied to the whole of the Winchester product, whether repeating rifles or single shot rifles, repeating shotguns or ammunition. There is no country on the face of the globe where these goods are not known, and it is a fact that at the present time over two millions of these guns are in use. Only the best of materials go into the guns, and each arm is thoroughly tested and tried by methods peculiar to the Winchester Company, before it is allowed to leave the works. Just as an instance of the thoroughness with which each piece is made, a brief summary of how the Winchester barrels are tested will probably furnish the best illustration.

Gun makers in general agree that the barrel is the most difficult part of a gun to make. In order to do this with success, a complete knowledge of the subject is needed, reinforced by experts, delicate and exact machinery, and a comprehensive system of tests.

When a Winchester barrel has been "rough" bored, as the first boring is called, it is proved for strength. This proof is made in the following manner: A soft steel barrel is locked to a fixing table, loaded with a charge of powder and lead, twice as large as the amount of the shell, for which the barrel is to be chambered, will contain. After proof firing, a barrel is carefully inspected, and if it shows the slightest sign of strain or imperfection it is condemned. A barrel which passes the proof is next straightened and given the second or "finish" boring. It is then straightened again, after which it is subjected to what is called the "Winchester" or "Lead" test, a process which never fails to make evident any irregularity in the interior of the barrel. This test is again made after the barrel is rifled, for the purpose of discovering any possible disturbance of the bore during the latter process. Such a test as this is so exacting that no other gun makers attempt it. Shot gun barrels are not subjected to the "Lead" test, but are tested by gauges which are so refined and delicate that they show variations of the thousandth part of an inch.

Another interesting point in the manufacture of these guns is their targeting for accuracy. At the plant of the company are ranges from one hundred feet up to two hundred yards. At these ranges every rifle is shot for the purpose of testing its accuracy, the distance, of course, varying according to the calibre. For this work alone a corps of experts is employed, the members of which devote their whole attention to this branch. That the tests are extremely rigid can be seen easily when it is known that before a rifle can be passed by them it must be capable of shooting seven consecutive bull's eyes on a standard sized target, for the distance shot.

The product of the Winchester Repeating Arms Company includes six different models of repeating rifles, two single shot rifles, three styles of repeating shot guns, a breech loading saluting cannon, metallic cartridges, loaded paper shotgun shells, paper and brass shells, gun wads, primers, percussion caps, reloading tools for rifle ammunition, and gun sundries.

Of the rifles, the model of 1873 is perhaps the most remarkable of small arms ever made. It was the first repeater to use the centre fire cartridges, and was for years the only one before the public. No gun has met with the success that this particular model has.

The Winchester Company, in addition to making the guns which have been described above, have also for many years been engaged in the manufacture of metallic ammunition, empty and loaded paper shot shells and other goods of like character. The same close care which is exercised by the company in the making of its guns is also exercised in the manufacture of ammunition, and in this, as in everything else, the work has been reduced to a scientific basis by the use of special apparatus and the making of practical experiments, embracing velocity, accuracy and penetration.

To be able to tell how fast a bullet or a charge of shot travels through the air, when discharged from a gun, seems to be an almost impossible feat, yet, with the aid of three chronographs, two of the Le Boulanger type and one of the Smith Tramway type, this can be done with extreme accuracy. In making tests for velocity the Winchester Company uses these three machines constantly. This test is made as follows:

The chronograph is connected with a wire just in front of the muzzle of the gun from which the cartridge is to be fired, and with the target by two electrical circuits. When the apparatus is connected, the signal is given and the cartridge to be tested is fired. The instant that the bullet leaves the muzzle of the gun it cuts the wire in front of the muzzle which is connected with the chronograph. The instant this wire is cut the instrument begins to register the time of the bullet's flight. When the bullet strikes the target shot at, it breaks the circuit connecting the chronograph and the target, and the instrument stops registering. The register shows the time taken by the bullet in travelling from the gun to the target. The distance is known, and it is then simply a process of reduction to feet per second.

Every lot of the Winchester cartridges is tested for accuracy by shooting them at the different ranges for which they are

adapted. Their penetration is determined by shooting them into pine boards of a given thickness. The result is compared with the number of boards a bullet of a given calibre should penetrate at the standard testing distance of fifteen feet, and the penetration of the bullet is thus found.

In closing this brief survey of this large industry and its products it only remains for me to say, that being the largest employer of labor in New Haven, the number employed being between 3,200 and 3,600, with its steady and con-

tinuous working, it is in more than one way a great benefit to the city. The fact that its work is continuous and steady means in itself a great deal to the business and industrial interests of the city. Employing, as it does, so many, it has become, although a private concern, in many respects a public one. If there are in that city any two institutions which have done more than all others to make the name of New Haven known far and wide throughout the world, those two are Yale University and the Winchester Repeating Arms Company.



The Rock Elm.*

The Rock Elm is one of the most useful trees, the wood being hard and firm and adapting itself readily to many domestic purposes. It was a favorite material for axe handles. As first known it was a magnificent tree, but, although still found of large size in Western Ontario, it is mainly represented by what is often commonly designated as "scrub elm," growing in waste places and along roadsides. The leaves are very similar to those of the White Elm (*Ulmus Americana*), that is, simply pinnate straight-veined, ovate in shape and with serrate edges, but are somewhat smoother to the touch. The distinguishing features are the racemed flowers, i.e., in loose elongated clusters, from which comes the classical name *Ulmus racemosa*, and the corky ridges on the twigs, which latter feature gives the tree one of its common names of Corky White Elm. In Macoun's Catalogue the following statement is made in regard to the Rock Elm:—

"Rather rare in the Eastern Townships, Quebec, and extending westward throughout Ontario in the limestone areas. This tree seems to be confined to dry gravelly soils, and is usually associated with sugar maple in such localities. It was formerly very common, and large numbers were cut down, squared and exported; but owing to the destruction of maple woods it is now found chiefly as second growth along roadsides and borders of fields."

The flowers appear in early spring before the leaves, and are soon followed by the fruit, which is larger and smoother than that of the White Elm, but must also be gathered and sown immediately when it comes from the tree. It is only in Southern Ontario that this tree is still a commercial wood. It is much superior to the other elms, and will take a high polish. Its chief uses are in the manufacture of agricultural implements, bicycle rims and wheel stock, but it is also employed for bridges and ship building and for heavy furniture.

Our illustration shows a tree in the usual situation in which it is now found. In the background will be seen a White Elm which shows a characteristic long clear bole of a tree which has grown up in the forest, since cleared away, leaving it in solitary and stately grandeur.

The American Elms are different species from those found in Britain. The English Elm (*Ulmus campestris*) grows best on low rich soil, and as it does not ripen seed in England is evidently an introduced variety. The Scotch Elm (*Ulmus montana*) grows in elevated situations, is common in Scotland, Ireland and the North of England, and, as it will produce fertile seed, is evidently native. It is a light, graceful, pendulous tree, and is the parent of the weeping variety. It is known as Wych Elm or Hazel, and in olden times it was used for the manufacture of bows, the use of the "wych-hasell" being enjoined by statute.

* Contributed by the Officers of the Canadian Forestry Association.

Forestry and Colonization.

The sole remaining member of the Commission on Forestry and Colonization appointed by the Government of the Province of Quebec, Hon. G. W. Stephens, K.C., has issued a report which deals with this admittedly difficult question in an able and impartial manner, giving due consideration to all the interests involved and outlining a policy which is thoroughly practical and undoubtedly practicable. The Commissioner may be congratulated on having hewed out so clear a path between the vagaries of the idealist and the inertia of the provincial.

The key note of the report is contained in the following paragraphs from the first chapter:—

"A Forest Reserve should be established as soon as possible. The Laurentian chain of mountains or hills, intersected by numerous rivers and dotted over with beautiful lakes, seem to have been created for the especial growth of trees. There is an abundance of hills, which are for the most part rocky and covered with a light depth of soil. There are few farms in the hill district which are not intersected by hills, which when cleared of the timber and exposed to the rain are spotted with bare rock. The land, as a rule, as you ascend the rivers, becomes unprofitable for agriculture. The farmers in this section are, for the most part, supported by wintering in the shanties; or where a good water power exists and is improved, a centre of population is collected. Farming in the Laurentides, as a rule, is not a very remunerative occupation, only the Canadian brought up on the border of the forest and possessing an experience and training in the shanties of the lumbering camp seems to possess the pluck and vitality to attempt it, and he deserves a better field for his indomitable perseverance and energy.

"Men clear up a farm and establish a home only to discover after many years of labor, early and late, that the soil, which at first produced fairly good crops, will no longer support the family. The

farmer has become hopelessly in debt, and migrates with his family to some manufacturing town over the border.

"The Government should direct colonization to good land, so that when a settler has cleared up his farm he can enjoy the profits of his labor and hand down to his children a property susceptible of continued improvements."

After recounting the steps taken on this continent and the continent of Europe for improving forest administration, the suggestion is made that a chair of Forestry should be founded at Laval University, the teacher to be obtained from the Forestry School at Nancy, in France. Or the Government could select a capable person from among its Land Agents to take the three years' course at Nancy. In view of the immense interests involved, the step would be more than justified. The management of the Forest Department in France has been remarkably successful, and inasmuch as it is a more flexible system than that of Germany, it would be more likely to give the training which would enable a student to adapt himself readily to Canadian conditions. The services of a trained forester would be invaluable to the Department of Lands and Forests in an advisory capacity, besides the educative influence that would be exerted. The forest area of Quebec is immense, comprising a tract equal to about forty-four times the size of England, and in the year 1901-2 it yielded a sum of \$1,234,072 out of a total Provincial revenue of \$4,515,169. It furnishes employment to the population during winter when agricultural operations are suspended, and round the paper and pulp mills, dependent on it for supply, are established villages and towns that retain many people who might otherwise drift away across the international boundary and be lost to the Province entirely.

In order to ensure the preservation and reproduction of the forest, the report goes on to say, three things are necessary: the perfecting of the system of fire protection; the strict enforcement of the

diameter limit of cut; the extinction of the jobbing speculator who takes up lots to sell the mercantile timber and to defraud the Government of its timber dues.

Forest fires have been responsible for widespread destruction in the forests of Quebec, estimated at from fifty to eighty-five per cent and the causes have been various, from the signal fire of the Indian to the surest signal of the advance of civilization before which that wandering race of hunters is gradually melting away,—the railway locomotive and the settler's clearing. And the last state of the land is worse than the first, for civilization seems to be a greater friend to destruction even than savagery. Due credit is given to the fire ranging system for the improvement it has brought about where it has been established and properly administered. It is of paramount importance, however, that the service should be brought to the highest state of efficiency and extended to every part of the Province. The recommendation is made that the Government should compel every lumberman to employ fire rangers from the first day of April to the first day of October in each year.

A change in fire regulations is suggested, namely, that article 1345 which prohibits setting fire in or within a mile of the forest, provided, however, that it shall be permitted for the purpose of clearing lands at any time except between the 1st July and the 1st September in each year, should be amended by changing the close season to between the 1st May and 1st October. An early spring with much dry weather makes the months of April and May dangerous months for the spread of fire. This has received a very pertinent illustration during the past spring. A provision that a space of fifty feet from the forest should be cleared of all inflammable material and that no brush heap should be set on fire at any time without such a fire strip, would be beneficial and should not be a hardship to the settler. In fact, careful settlers have adopted this and other precautions with success. The need of education is illustrated by a conversation between two settlers in the Temiscamingue district which was overheard lately. The best method of clearing

lands was being discussed and one settler declared that the best way was to set fire to the woods around. Strict enforcement of the regulations is an absolute necessity.

A statement of grave importance is to the effect that by far the most prolific cause of forest fires is the isolated squatter, who settles down in the midst of valuable limits, and the bogus settler whose name is used by a neighboring mill owner for the purpose of plundering the limit holder and defrauding the Government of its dues, while, judging from the number of cases submitted to the Commission, frauds of this kind have increased during the past few years to an alarming extent. The moral is clear. No lots should be sold except such as are fit for agriculture, otherwise the result will be that, as has occurred south of the St. Lawrence, the forest lands will pass into private hands and cease to be a source of revenue to the Province. In one case examined by the Commissioners, 142 lots had been taken out of one limit by this method, the great majority of which were unfit for cultivation, and had evidently been taken by speculators under false pretence. It is clear that some better system of management of colonization should be adopted, so that the settlers may be directed to the good agricultural lands and settlements made more compact. This is the opinion of men who are deeply interested in colonization and to whom it is the first concern. Concentration on such lands would enable the Government to spend the colonization money to advantage in making good roads and bridges, so indispensable to the prosperity and success of the settler. The settlers, being nearer together, would have the advantage of the assistance of neighbors. The parish church and village school would be established and supported with less difficulty, and a strong and prosperous settlement would result.

For the preservation of the forest a diameter limit for cutting is necessary, and on the whole a twelve inch limit appears, from present knowledge, to be the most profitable. The report recommends that this limitation should be strictly enforced. But this is not suffi-



TRANSPORTATION IN THE FAR NORTHWEST.
Hudson's Bay Company's Indian Trappers and Voyageurs



RIVER AND PORTAGE.

- (1) Saw running the Rapids at Smith Portage.
- (2) Carts on Portage at Slave River.
- (3) Steamer Grathame on the Athabasca
- (4) Trunway at the Grand Rapids of the Athabasca.

cient to ensure reproduction and the growth of a new crop of pine and spruce seedlings. It will ensure a supply of seed, but the other conditions of reproduction may be absent. The debris of lumbering, besides being a great source of danger from fire, is also an impediment to the new growth. The suggestion is made that the tops should be branched so as to fall flat on the earth, where they would soon decay, and help instead of hindering reproduction. It is calculated that it would not take more than one cent per lop for clearing spruce tops in this way.

Replanting of waste places is at present, and rightly, considered an impossibility, on account of the cost; but where sand dunes are destroying good agricultural land, it might be advisable to adopt this plan, even at the present time. The bruises or burnt spaces might be assisted to reproduce pine and spruce by scattering seed in suitable places, or by regu-

larly seeding down selected spots in elevated places, from which seed might be afterwards distributed by natural processes. The reproduction of the forest is a question difficult of clear and definite solution in the present condition of our knowledge of tree growth, and with the comparatively low values of forest products, but the suggestions made are practicable and are in the right direction.

In conclusion, it may be said that the report is one of great value, which should be read carefully by every citizen of the Province of Quebec. The principle that non-agricultural lands should be kept for forest purposes, and that permanently, is one that should be pressed upon the attention of the people of Canada until it is thoroughly accepted and understood, and then it will be possible to make further advances which are a necessary sequence to the adoption of such a policy.



Labrador.

BY WILFRED GRENFELL, M.D.

Only those who have had to fit a vessel for a long voyage know how hard it is to get away. There are a thousand and one things the most methodical minds omit, and every last hour or two is characterized by hurried messengers with paper parcels arriving from all sorts of quarters, which, at the last moment, are flung loose upon the settles, and often well shuffled up by the sea outside the harbor, before one can leave the deck, and get the first watch set. The hospitality of the Newfoundlanders, which is proverbial in the outports, is maintained also in St. John's, and almost reaches the "open house" of the Anglo-Indian in India. This, also, makes it no easier task to get away. But added to all these, this year was a month of northeast wind, fog, cold, and absence of sunshine, with ice late pegged in on the land, and all reports from the north insisting "it is no good starting yet

awhile anyhow." Even so late as June 20th we heard of a schooner crushed in ice and lost at Quirpon, and all the unfortunate fisher folk for the Straits and Labrador unable to get north, owing to the persistent northeasters. One vessel, for instance, a seventy-five-ton schooner, called the Co-operator, which left St. John's for sea on the 6th of June, we passed a few hours after leaving St. John's ourselves, when we eventually got away on the 25th. The average man of to-day cannot possibly estimate what this means in these days of rapid communication. Here are places now on the French Shore and Straits waiting three weeks for salt and provisions, and here are hundreds of families day after day lying at anchor in drizzly fog, feeling just as much locked up as if they were in the penitentiary, while they know it is no fault of theirs that the precious days are slipping away in which, out of the

whole 365, they can expect to earn food and necessities for their families, with the additional tantalizing information that the Norwegian catch is short, and that prices are likely to rule high, while cod liver oil, owing to a combine in New York, has risen to almost fabulous sums. This latter fact accounted for some weird machinery in the sheet iron and tin, which is now loading the Strathcona's decks, and which, at the last moment, literally at midnight, we hustled aboard to help the people around Engle to save their cod livers, and refine instead of rotting out their oil. A number of small factories are being started, I am delighted to know, all around the coast this year. Indeed, though one left Labrador last year, feeling almost that, after the fearful price of fish, it was a case of *apres cela le deluge*, one returns to find fresh enterprise and excellent prospects everywhere. It is quite true many schooners hoisted the broom at the mast-head last fall, and not so many craft will be down this year, but that considering the decline in salmon and fish in quantity, is not altogether a bad thing, and it is chiefly the smaller and poorer craft only that are laid up this season, after all.

The lumber areas in Labrador, worked for the first time last year, have proved a great success. Fresh areas all along the coast are being taken up. One mine is certain to be worked, and very profitably too. Several whaling stations will shortly be opened, and there is a great deal brighter prospect for residents next winter, to say nothing of the visions of abundant fat meat for the trusty Labrador dog, while gold mines in White Bay, and valuable mines in other parts of Newfoundland have also been opened up, even since that time. The gift of a new dynamo and engine for the Strathcona has enabled us to install electric light this year, and this, with the promise of a searchlight, will add greatly to both her comfort and safety this year. At the last moment the searchlight did not arrive, but we hope to get one ere the summer has flown. This installation will enable us also to dispense with the exceedingly troublesome storage battery for an X-rays, as we shall now be able to run it direct from the dynamo current.

The generosity of friends in Canada and the States has enabled us to add many other desirable additions to our hospitals in Labrador, and the French Shore. A new laundry for Battle Hospital, which will, we hope, preach a few not unnecessary lessons in both economy and sanitation. Rubber matting for the wards and passages have been given, which will add greatly to the facilities for keeping clean, and assist to do away with much noise, caused by the wood flooring of the building. A new examination chair, and also a very valuable self-mobile invalids' wheel chair have also been added. This is already in use, on loan, to an old friend and a Labrador fisherman, who will henceforth appreciate the boon it will be to others. A few splints, an odd leg or two, and some other necessary apparatus also arrived in time for our sailing. As we have been given a fine new metal working lathe, we are sending it down to be erected at the little mill at Engle, where we have steam power and other machinery. I ought not to forget here a number of new Sloyd, or carpenters' benches, with sets of tools, etc. These we shall erect at the schools, and we hope to be able to give valuable manual training, as well as pleasant employment, in the long evenings next winter. I have often noticed how much skill is wasted for want of good tools. A few years ago in the French Shore we fitted out a deaf and dumb lad with a complete set of tools. He had shown considerable skill, whittling with his knife, but ever since he has been turning out most useful articles for domestic comfort, which one does not ordinarily see in the small houses. We are also taking down a number of loan libraries from both Canada and the States to distribute and keep in circulation.

The energy of Judge Prowse (of St. John's, Newfoundland), has almost succeeded in establishing a Carnegie public library in St. John's, and, as he wrote me two years ago, this system of loan libraries, as carried out in Canada and the Western States, was to be part of his scheme. Thus he hoped to afford this best of all method of helping self-education to all the scattered communities, where now even old magazines are

rare and valuable. The intellect of scholars and wise men cannot develop and grow strong on ephemeral literature of that kind, and we hope that our experiment, which is new, we believe, to this ancient colony, will be really useful, as we know it will be appreciated. Another experiment, that has already shown its value in these isolated regions, has been the regular ambulance instruction given every winter at St. Anthony. While in the woods last winter one man slipped his axe and cut his leg very severely. One of our men, who has received the certificate of the St. John's Ambulance Society of London, was fortunately at hand. He controlled the hemorrhage in the proper manner above the wound, and brought the man out to Dr. Simpson on his wood sleigh, without either filling the wound with tobacco, flour, or any other of the favorite local hemostatics and blood poisons. Result—six stitches and a wound healed at once.

Leaving the wharf in St. John's, at 2 a.m. we crept out in the dark—the friendly stars shining out for the first time since our arrival. We were to have given a friendly pluck outside, as the first southerly air was already moving overhead. But in the darkness she did not see us, and without a searchlight we could not find her, so after hailing one or two suspicious looking craft, we steamed away out through the Narrows and headed away north for an eleventh season on "Labrador."

A heavy roll to start with is always a

severe test after a long laying up in harbor, and a number of our amateurs did not look like ruling the waves after a few hours out, while to add to our troubles the good ship capsized the whole table a few moments after breakfast was laid upon it. Why it waited six and a half hours before it accomplished that feat it is difficult to say. The beautiful sights of a voyage on the Newfoundland coast at this time of the year, soon, however, brought the invalids on deck. We were passing the lofty cliffs of Baccalien before noon, and at evening lay at anchor in motionless water in Sir Charles Hamilton's inlet, waiting daylight to run up to Dog Bay, where we wanted to visit a lumber mill. We passed on the way numerous noble icebergs, magnified and intensified enormously by an exquisite mirage, schooners like square-rigged ships from the inverted images above them in the air—mountains of ice, not yet above the real horizon, flashing in and out of sight like transformation effects, islands melting into the air on the reflection of the long, heavy swell, and then reappearing, first as needles or pinnacles, and then as buttressed fortifications, only once more to melt into the air. It is phenomena, such as these, with the bracing air, long days, and excellent sporting opportunities that are attracting more and more tourists each year to these shores. Indeed, there is every presumption that in the not very distant future, Labrador and its northern fiords will prove to be the Norway of the West Atlantic.



The School of Mines, of Kingston, has issued in neat pamphlet form, well illustrated, a report of the course of lectures on Forestry delivered by Dr. B. E. Fernow, at Queen's University, 26th-30th January

last. The lectures deal in an interesting and instructive way with different phases of the subject. Copies of the report may be obtained from Mr. Geo. V. Chown, Registrar of the School of Mines.

The Art of Forestry.*

BY A. HAROLD UNWIN.

1. FOREST MANAGEMENT.

No doubt many know what the above means, but, at the same time, perhaps it is not out of place to give the most salient features of what is understood by the term Forest Management. First of all, everyone will agree that the culling of a piece of timbered ground of the best trees cannot, under any circumstances, be termed "forest management." This must be called by its true name, a short-sighted policy of forest destruction. Of course, it is much more profitable for the time being to do this, rather than give any attention to the perpetuity of the forest and its products; but here the great disadvantage of forestry comes, in that it does not only deal with the present, but with the future, and involves long periods; hence its small return (in per cent. on capital represented in growing timber) compared to other arts and crafts. One has, in fact, to use the interest and not the principal; that is the main issue in forestry.

Real forest management begins when a forest is used with a view to obtaining a "permanent annual yield" in timber, and hence a permanent annual return in money, which, as timber gradually enhances in value, should steadily increase. The "permanent annual yield," as the out-turn in timber from a forest has been termed by Dr. Schlich, the greatest living English authority on Forestry, is the *accumulated* growth of *many* years on a certain *fractional part* of the whole area, or, in other words, is the same quantity as the growth of woody fibre in *all* the trees of the *whole* area in *one* year.

The question naturally next arises as to when it is profitable and timely so to use the growing timber of a forest that its permanency is insured, and at the same time a reasonable return to the seller of the lumber is attained. This, of course, depends on whether the wooded land is to be devoted perma-

nently to the growing of timber trees, or whether it is eventually to be used for raising agricultural crops.

On the latter class of land it is natural that no very elaborate scheme of utilizing the present crops of trees can be adopted, as it would be best if the land were to be cleared of timber, within 10 or 20 percent in area, by the time it was ready to be taken up by settlers. Hence, on such land, the use of the forest products cannot be of a conservative nature. This is "out and out" or "absolutely" agricultural land. Then there are areas which would yield good returns under trees, but on which it will scarcely pay to practice agriculture. This may be called "relatively" forest land, because though agriculture has a claim upon it, it is, on the whole, better utilized forestally. Lastly, there are lands which are stony, rocky, and either chemically or otherwise unfit for agriculture, and which do not admit of any other form of use except that of forest crops. Such land is "absolute" forest land. The above terms, which are very exact, and contain a definite classification of the land in them, have been given by the best European authorities on Forestry.

On the last two named categories of land, forestry, and hence forest management, has a place. The objects of management are naturally the first consideration, and depend entirely upon the owner, and to a certain extent on the limit holder, as the case may be. The owners naturally include the Government, Federal or Provincial, Corporations and private individuals. It has to be decided, first, what is to be permanently utilized, and, latterly, produced. For instance, as a few of the aims, the following might be cited: Keeping the forest canopy intact, so as to conserve the moisture of the air and soil to the greatest extent; second, to produce pulp wood of six inches diameter and upwards; third, to use lumber of long, clean

*Contributed by the Officers of the Canadian Forestry Association.

length, say thirty feet and upwards, and of a specific diameter; fourth, to cut a certain quantity of cord wood per year, etc.

A plan of the scheme of management is next made, and as to whether this is very elaborate or not will depend entirely on the then, or in the near future, prevailing stumpage prices; and in practice it comes to this, that the lower the value of the wood, the rougher and simpler the plan must be. It is not worth while and does not pay to spend a great deal of time in preparing a scheme of cutting if the value of the lumber is not high.

In its main features the plans are alike, whether the limit is worked on an "extensive" or "intensive" (as in Europe generally now) system. It contains, as also according to the best European practice (now also in vogue in the United States):—

(1). A map of the forest limit on a fairly large scale, showing trails, roads, watercourses and boundaries.

(2). General description of the species of trees, soil and age of trees on the limit, as also the distribution of the different species over the area, and altitude of the forest above sea level.

(3). General objects of management, such as rotation, that is, time which elapses between the sowing of the seed

(self-sown) and the cutting of the mature tree, or the age at which a tree reaches merchantable dimensions, for example: Spruce for pulpwood, 30 years old, in good soil.

A practical example of this in its simplest form would be found, supposing a limit or forest contained 100,000 acres, trees to be cut when 100 years (rotation) old; hence, area to be cut each year would be 1,000 acres of 100-year old trees, or 1-100 part of the whole area, which represents, condensed in a small space, the growth of *all* the trees on the *whole* area in one year.

(4). Special plan showing what areas are to be culled or completely cleared of lumber in successive years, due modifications being made in the interests of fire protection and damage by the wind. The above is usually made out for a number of years (about 30), subject to revision from time to time. As a matter of experience, where forests are protected from fire, it has been found that the crop is much more certain than any other land produce, hence the utility of a plan for such a length of time.

The practical working of such a scheme involves quite a number of technical details, which must be left unmentioned for the present for the sake of brevity.



Fur-Bearing Animals.

BY H. YOUNG.

At the last meeting of the Edmonton Gun Club, I read an article dealing with the matter of the better protection of feathered game, deer, and fur-bearing animals, in the district of Alberta, and I think that, owing to the support given, it has aroused considerable interest in this matter, and has, I think, done some good along the lines aimed at—better protection and preservation of fur-bearing animals and game birds.

In this article I will only deal with the question of protection of the fur-bearing animals in the unorganized districts of the North. In these districts

the protection of game and all animals is one coming under the control of the Dominion Government, and the importance of the interests involved makes it a matter deserving all attention.

It is strange that, though there are many Canadian fur dealers in Canada, some with an international reputation, none of them has ever been represented in the Edmonton market, while American firms have always been represented. Edmonton to-day is one of the largest markets for the sale of raw furs direct from the hands of the trappers.

It may surprise many not very fami-

liar with the trade to learn that of the large quantity of fur annually brought in here, not more than one-half will grade No. 1, and a quarter of it will grade No. 3 and lower. What would be thought of a farmer who killed or sold his steers when they were in poor order, or cut his crop before it was ripe? Yet that is exactly what is being done in the fur trade to-day. Bears are being killed in summer, value fifty cents; same skin, killed in season, value \$15. Silver fox, killed too early or too late in the season, is worth perhaps \$5; same skins, killed in season, worth often \$500. And the same is true of all other kinds of furs. Neither the Hudson's Bay Co. nor any other trader wants these poor skins. The only reason they trade them is because the trapper says to both: "Buy my poor furs; or, if you don't, I will not give you my good fur when I have any." Competition is keen, and one trader is afraid of another; so the trapper forces their hands. The Indian trapper has, I suppose, a vested right in the fur of the North; but he certainly does not own it. The fur of the North is a valuable asset of the Dominion, as much so as are timber and fish. An Indian has no care for to-morrow; so I think the Government should step in and prevent them from destroying recklessly their only present means of making their living, and preserve, as long as possible, the rich fur preserves of the North.

There is, in my opinion, only one way to stop this evil, and that is to prohibit the export of furs of a low or unprime grade. When traders found they could not sell these skins, they would cease buying them, and be glad to do it. The Indian would stop killing, because he would not be able to sell either, and would

have no complaint against the Government for any stoppage of rights he may consider himself possessed of.

I have spoken on this subject with such well known men in the fur trade as Messrs. McDougall & Secord, Ross Bros., Bredin & Cornwall, Jas. Hislop, of Hislop & Nagle, W. Connor, Falk & Swiggart, Colin Fraser, Stennett & Gilmer, Thos. Hourston, representing Ullman & Co., and many others.

I know they all endorse my opinion on this subject, both as to the extent of the evil and the means to be adopted for its suppression.

I would wish to make a special plea for the Beaver. This most valuable, but defenceless animal, is surely and rapidly being exterminated, and I would wish to impress on everyone the necessity of having it protected. I myself have seen it disappear from large tracts of this country. In Peace River, once thought to be the very home of the Beaver, it is about killed out; another year or two will do the business. All over the country it is the same. There is now only one place where they are really plentiful, and that is in the country north and west of Fort de Liard, on the Liard River, and the streams tributary to it. Here they are being surrounded, and it will be only a short time when what has happened elsewhere will happen here. The Beaver is a valuable animal, and, if given a decent chance to live, will be a source of livelihood, as well as revenue, to Indians for years to come. They are being protected now all over the country in places where they are practically almost extinct. Would it not be wise in the case of the north-country to afford a measure of protection while there are some still in existence?



Some kinds of shooting cost like sixty. For example: An alleged sportsman paid, lately, \$900.00 because he had

indulged in the luxury of a shot at a cow moose. They evidently manage some things excellently in the State of Maine.

Our Medicine Bag.

The Commissioner of Lands and Forests for the Province of Quebec in his annual report, referring to the appointment of the Commission on Forestry and Colonization, makes the following statement of the circumstances which induced the Government to ask for the appointment of such a commission :

"In this country the settlement and opening up of our vacant lands and the consequent increase of our population constitute our chief aim. All our energies are directed to that end, for from it is derived the political influence we now have and which we are to possess in the future.

"On the other hand, we have immense wealth to develop by the exploitation of our vast forests. They constitute our greatest source of revenue, and from those forests, with the aid of our innumerable water powers, we shall obtain what our province needs to become a great manufacturing country, and thereby retain that section of our population that is always ready to emigrate.

"True settlers and timber license holders, when they remain within their respective spheres, do not hinder, but, on the contrary, assist one another. In regions remote from the large centres, colonization progresses in proportion to the extent and prosperity of lumbering operations, for the latter create markets for the former."

A serious difficulty has, however, arisen from the fact that, owing to the increased value of timber, especially wood suitable for the manufacture of pulp, merchants, both great and small, and manufacturers of all kinds, associate with the settlers and make use of them to obtain control of timber lands, many of which are now under license. The effect of this would be injustice to the limit holders, would ruin the credit of the province, and would finally result in these lands being transferred to other lumber operators and placed beyond the control of the province.

The difficulties of administration of a large province, rich in natural resources

for which there is a great demand, are undoubtedly great, and if the Government feel that a full enquiry, by a Commission will assist them in arriving at a solution of the difficulties there can be no objection to that step. It is to be hoped, however, that the Commission will be composed in such a way and placed in such a position as to do its work thoroughly and impartially and make its report without delay. It is regrettable that ground should be given for any feeling that the enquiry has not been pushed as vigorously as is desirable.

A plea for the poor settler is often put forward to deceive the public as to the character of the spurious settlement above referred to, and it is specially desirable that such a practice, in so far as it is attempted, should be set in its proper light. In addition to this, however, there is the question of *bona fide* settlement on lands that are unfit for agriculture, which in its results is no less disastrous to the true objects of colonization and the finances of the province than settlement of an altogether illegitimate type. The Commission should make a thorough and comprehensive investigation of the whole problem.

The following suggested resolution was received from Colonel F. W. Warren, of Vancouver, too late for submission to the annual meeting of the Canadian Forestry Association :

"That the Dominion Government be requested to co-operate with the governments of the provinces interested therein—especially British Columbia—with a view to locate and reserve another National Park for the purpose of Forest and Game Preservation. That the location in British Columbia be somewhere on the route of the projected Trans-continental Railways. That with such object in view the governments interested be requested to take the necessary steps to prevent the land grants to any railway company from conflicting therewith, and that the necessary clauses be inserted in

their charters making the land grants subservient to the location of the reserves."

Colonel Warren adds that the precise location of the park to be chosen in British Columbia might be at a spot where both moose and caribou frequent and the country is well wooded and well watered, and that possibly such a district could be found in the neighborhood of the Parsnip and Pine Rivers.

It is timely that attention should be called to this question, and that steps should be taken in the direction indicated by Colonel Warren. The experience of the past, in the destruction of forests following the construction of railways, makes the whole subject of forest protection along the route of the new trans-continental line one of paramount interest.

In engaging Mr. Walter S. Glynn, of Liverpool, England, to judge several breeds at the big dog show to be held in Toronto in September, the management has made a master stroke. Mr. Glynn is the eldest son of Mr. Walter Glynn, of Liverpool, the head of probably the largest existing shipping firm, and is by profession a barrister, whose practice is in the "Admiralty Court." Mr. Glynn is a member of the Kennel Club committee, and a most regular attendant at the meetings of that body, and is of great assistance in its deliberations. In addition, Mr. Glynn is a member of several specialty clubs, and though he does not look for judging engagements, he has several times judged fox terriers and other rough terriers at most of the principal shows. Indeed, he has officiated at least at one fox terrier club show, that held at Cheltenham. His first love was the fox terrier, and he has owned some good ones, though his strong kennel consists mainly of the hardy and handy Welsh terrier. Amongst the fox terriers he has owned are Champion Brynhir Rags, Displacer, Deftly, etc. We are confident that this gentleman will attract a record entry of the ever present fox terrier at Toronto, while it is probable he will also judge Airedale, Scottish and Welsh terriers, in all of which he is a known authority. From

advance proofs of the premium list we notice there are, besides the usual cash prizes, a very large number of valuable special prizes, which have been apportioned very judiciously to the different breeds.

"Ashmont" is the nom de plume of a recognized authority on canine treatment and diseases. His "Kennel Secrets" has gone through one large edition, and is to be republished in the autumn by Messrs. Little, Brown & Co., of Boston. The same firm has just issued a second edition of "Kennel Diseases" by this author, for which we predict an even greater demand than in the first. It should, and probably will, become *the* text book on the treatment of those varied ills to which the dog is so subject—especially the well-bred animal. As "Ashmont" says, there are no specifics in animal practice. Sometimes one medicine is needed, sometimes another for the same disease, and therefore this work, which is richer in recipes than any other with which we are acquainted, should win itself a place on the shelves of every dog-owning and dog-loving man. Chapters on sick quarters and nursing are followed by others on the principles and practice of medicine. The diseases of the respiratory, circulatory, nervous and digestive systems, as well as of mouth, tongue, eye, ear, bone and joints are all described and appropriate remedies indicated. The chapter on obstinate diseases of the skin will be of inestimable value to those whose charges suffer from mange or eczema—and what kennels are at all times free from these inflictions? Little, Brown & Company, Boston, are the publishers.

The executive of the Canadian Kennel Club called an open meeting, during the Montreal show, of all interested in dogs. It was held in the Arena, Mr. John G. Kent, president of the C. K. C., in the chair, and there was a very good attendance. Mr. H. B. Donovan, the secretary, was also present. The meeting, as explained by the Chairman, was called to consider the relations existing between the A. K. C. and the C. K. C.,



SIR DONALD RANGE.

Photographed by Mr. A. O. Wheeler from Mt. Abbott. Sir Donald, (to right) Eagle and Avalanche Peaks are shown.



ROCK ELM.

(*Ulmus racemosa.*)

A graceful and useful species, growing usually on interval land.

also a proposition which had been made by the latter towards the mutual recognition of wins. Mr. Vredenburg, secretary of the A. K. C., who was present, clearly set forth the position of the body he represents, and held out no hope that anything short of a complete surrender would be entertained. The C. K. C. and other clubs in Canada would be received on the same terms as kennel clubs in the United States, and probably an advisory board would be allowed. The idea of absorption did not go down with a large number of the Canadians present, and a long discussion took place, the result being that the meeting broke up with the whole question remaining as it is. During the meeting Mr. Donovan read the result of a postal vote of the members of the C. K. C., which was practically unanimous in holding to the national character of the institution.

Elsewhere in this issue will be found an illustration of the Hudson's Bay Company's steamer, "Mount Royal." The Mount Royal was built for service on the Skeena and Stikine rivers in Northern British Columbia, and has given the greatest satisfaction. She was launched at Victoria, B.C., on April 19, 1902, and cost \$25,000.00. Her dimensions are as follows: Length 138 ft.; beam 28 ft.; depth 5 ft.

She is driven by engines having 14 inch cylinders, with a stroke of 60 inches working at 28 to 30 revolutions a minute. They give her a speed in still water of 15 knots. The shaft is of nickel steel and hollow. The boiler is of the locomotive type, working under a pressure of 200 lbs. to the square inch. The Mount Royal has steam steering gear and a steam capstan, as well as electric light plant and electric searchlight. In the design an endeavor was made to obtain a maximum of power with her shallow draft, to permit of her use at any stage of water. She can carry 80 tons on a draft of 27 inches, and fifty first class passengers can be given state-room berths and excellent accommodation. Travelers of the usual backwoods type—willing to spread their blankets on the softest plank obtainable—could be carried largely in excess of this.

This boat has made record trips on both the Skeena and Stikine, and has shown herself to be the very best model yet built to climb the swift Pacific Coast rivers.

The Stikine, in Northern British Columbia, is one of those swift streams known to prospectors as "ground sluice" rivers. The grade is high and wonderfully even, though it becomes somewhat steeper as the higher waters are reached. Telegraph Creek is some 150 miles from the Pacific, and at an elevation of 600 ft. Throughout this distance there are, practically, no pools or resting places; the water is "quick" all the way, excepting at the "Little" and "Kloochman's" canyons, where it is "quicker." Above Telegraph Creek the Grand Canyon is unpassable for 40 miles. There is magnificent hunting along the tributaries of this turbulent northern stream, the Iskoot, Clearwater, Little South Branch and Tahltan being locally famous. Above the Grand Canyon the country is hardly known to white men, though the Tahltan Indians—fast dying off—kill large quantities of moose, caribou, deer and Stone's sheep therein.

We took up "Moose Hunting, Salmon Fishing, and other Sketches of Sport," by Mr. T. R. Pattillo, with considerable interest, as these and a few other avocations are our pet weaknesses, and opening the book at random, "Jenny Lind's the fly" were the first words we read. We became interested at once, for nowhere in Canada will you find a trout water where the Jenny Lind will not beguile salvelinus into your creel. In this case, however, it was salmo salar that was captured, which certainly was just a little bit out of the ordinary duty of even a Jenny Lind. Much of the author's sport was had in Nova Scotia, in days now long past; yet, not all, for he enjoyed his fill of shooting in the North-West territory in 1890 and 1891, when, as he writes: "Canadian and wavy geese by the tens of thousands made the stubble fields their feeding ground, and the lakes their resting places. Myriads of ducks in endless variety fed in the pond holes and lakes, as well as on the

prairie, while chickens in large flocks abounded in every direction." And as it was then so is it to-day. The volume is a plain, unvarnished tale by a sportsman of the good old school, and will be found both interesting and a useful guide. It is published by William Briggs, Toronto.

The American Sportsman's Library—good as all the volumes so far issued are—contains as yet no book of greater interest to Canadian hunters than that on the deer family, to which the President of the United States contributes some of the most instructive chapters. The introduction is one that any sportsman would profit by reading. It treats of the foundations of sport, as it were the bottom facts all must know whose aspirations lie in the skilful use of the rifle. All North American deer are described and their habitats defined; clothing fit for the still-hunter's wear described; game preservation admirably insisted upon and wholesale slaughter deprecated. Then follow successive chapters on the mule and whitetail deer, antelope, wapiti, blacktail, caribou, and last, but certainly not least, a good description of our own Canadian forest giant—the moose. There should be a great demand in the Dominion for this admirable volume of a series, for which Mr. Caspar Whitney and the Macmillan Company deserve the thanks of all fond of big game hunting.

We intended to publish in this issue an illustration showing the Westmount Gun Club team, which won the Montreal Challenge Trophy, at Ottawa, on Easter Monday, but unfortunately the photograph furnished us was too poor to reproduce. Every man in the country who has ever shot at the traps, remembers the old cup put up by the original Montreal Gun Club, seventeen years ago. The competition is fifteen targets per man, teams of five men, and being such a short race, is usually close. This match was no exception, and was really decided only by Mr. Kennedy's last bird, the scores being 54 to 55. On the first round, Westmount led; in the second, Ottawa tied the score; and when Cameron and

Kennedy remained to shoot, the breaks on each side totalled equal exactly. This is the second time only in ten years that the invincible St. Huberts have been beaten on their own grounds. The Ottawa team was Capt. Higginson, Capt. Boville, Dr. White, C. Panet and W. L. Cameron.

The Annual Report of the Crown Lands Department for the Province of New Brunswick shows the total revenue from timber lands for the year 1902 as \$153,368, the amount obtained from sales and renewals of timber licenses being \$45,432, and from stumpage dues \$107,936. This is a decrease of \$21,155 from the year 1901, but the decrease is in the returns from the sale of licenses, the stumpage dues having increased by \$6,700. The principal items in the statement of lumber cut from Crown Lands are spruce and pine, 86,531,693 feet; hemlock, 2,388,567 feet; cedar, 15,357,249 feet; fir, 2,764,411 feet; hardwood, 2,936,007 feet; railway ties, 104,564 pieces. The prospects were that the cut for the past winter would be larger than for the past few years. Persons in the lumber business are anxious to secure control of spruce and pine-growing lands. The highest rate paid at the sale of timber licenses was \$125 per square mile.

Mr. Dwight W. Huntington has written a very useful book upon the feathered game of this continent, and we expect a large sale for it. In his introduction he says: "Some years ago I was shooting ducks in North Dakota, with some army officers from Fort Totten. In looking over the bag one evening I found a number of birds which were entirely new to me. Several of them were not mentioned in any of the books on field sports. It occurred to me then that a book describing every game bird would be a very valuable addition to a sportsman's library." So the volume under consideration was written—for sportsmen by a sportsman—and there is no gainsaying that "Our Feathered Game" should be on every shooter's bookshelves. His account of the woodcock and woodcock shooting is one of

the best we have come across. Grouse, turkey, quail, wildfowl and shore birds are all described accurately and intelligently. Charles Scribner's Sons are the publishers.



We are this month able to give the full judges' slate for Toronto's big dog show to be held in September. The management has endeavored to place none but men fully competent to judge the classes assigned them, and they have ably succeeded, as the following list will show :

Walter S. Glynn, Esq., London, England, will take Fox Terriers (smooth and wire-haired), Airedales, Scottish and Welsh Terriers.

Jas. Lindsay, Esq., Montreal—Irish Terriers. W. C. Codman, Esq., Providence, R.I.—Bull Dogs, Boston Terriers, Black and Tan Terriers.

Henry Jarrett, Esq., Chestnut Hill, Pa.—Collies and English Sheep Dogs.

W. T. Payne, Esq., Kingston, Pa.—Sporting Spaniels.

H. W. Lacy, Esq., Boston, Mass. — St. Bernards, Mastiffs, Bloodhounds, Newfoundland, Great Danes, Russian Wolfhounds, Deerhounds, Greyhounds, Poodles, Dalmatians, Dachshunde, Pugs, Whippets, Italian Greyhounds, Pomeranians, Toy and Japanese Spaniels, Yorkshire and Toy Black and Tan Terriers.

Jas. Mortimer, Esq., Hempstead, L.I.—Pointers, Setters, Foxhounds, Harriers, Beagles, Chesapeake Bay Dogs, Bull Terriers, Skye Terriers, Bedlington Terriers and Miscellaneous.

The "Seventh Annual Report of the New York Zoological Society" provides excellent reading for all those who take an active interest in the promotion of zoology and the preservation of those animals which are native to the continent of America. Even those who take but a casual interest in these subjects will find the time spent upon a perusal of this volume amply repaid. We would especially commend to our readers an article by Mr. Madison Grant, dealing with the classification into different species of the barren ground and woodland caribou.



Sporting Yarns ; Spun off the Reel, is the title of a very amusing book written by Col. Andrew C. P. Haggard, D.S.O. Col. Haggard is well known to Canadian sportsmen, and hence they will take more than usual interest in this collection of stories. From salmon in Scotland and Newfoundland to lions in Abyssinia is the whole gamut of the all-round sportsman's scale—but the gallant Colonel runs up and down it with never a false note. The chapters that should interest Canadian sportsmen most are those on Ouana-niche, Moose Hunting, New Canadian Waters, An August Day on the Grand Cascapedia, and A Christmas Bighorn. Hutchinson & Co., London, are the publishers.

We illustrate herewith the Savage 25-35, 32-40 and 38-55 repeaters. These are meeting with an enthusiastic reception from riflemen throughout the country. The progressive shooter is not long in learning full particulars of any new goods from American manufacturers, and he

may be used with perfect safety to the shooter. These high power 32-40 and 38-55 are excellent big game loads. When you buy a Savage you will possess a fire-arm that will give the service you expect. In other words, the rifle will be more accurate and reliable, and you



seems to have hit on the new Savage products with unusual quickness. The new sizes are adapted to the famous Model 1899, which has hitherto been made in the 30-30 and .303 calibers only. All barrels of the Model 1899 are of Savage smokeless steel, and the new high pressure loads

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

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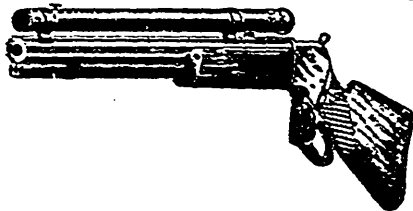


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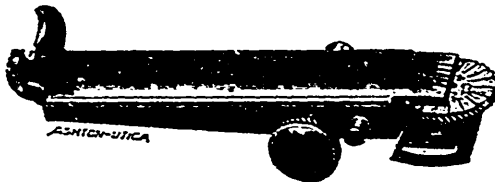
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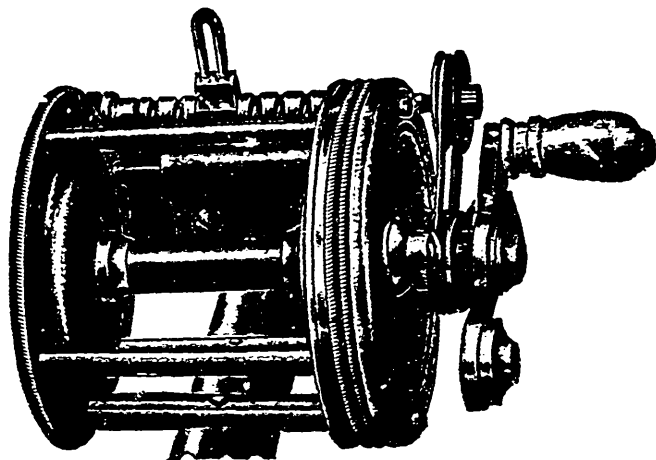
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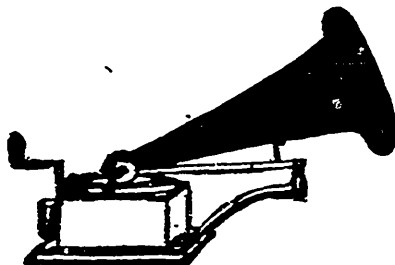
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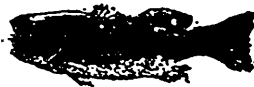
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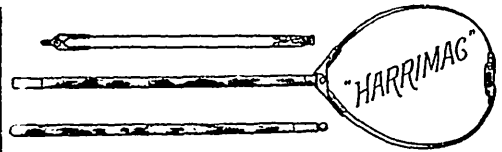
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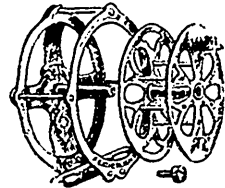
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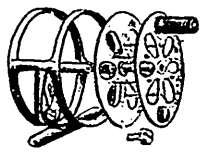
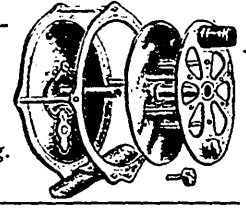


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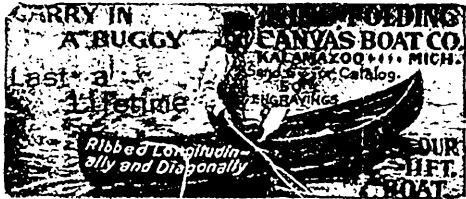


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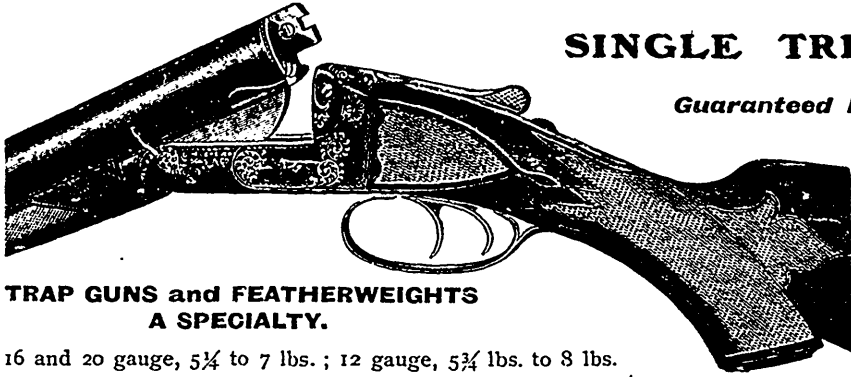
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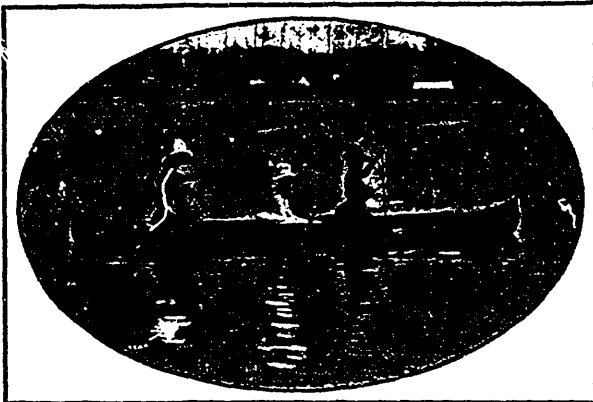


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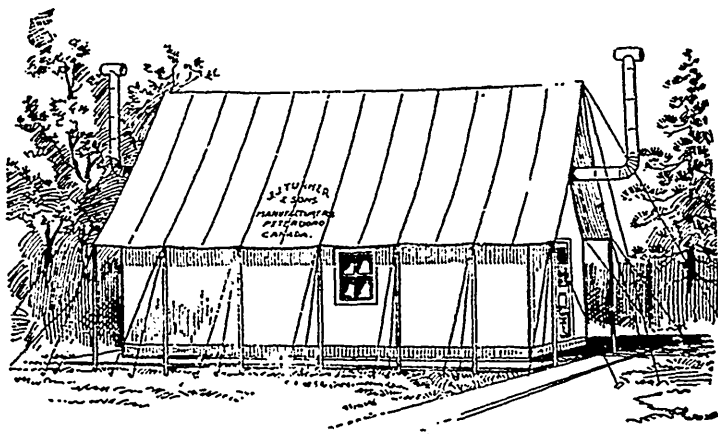
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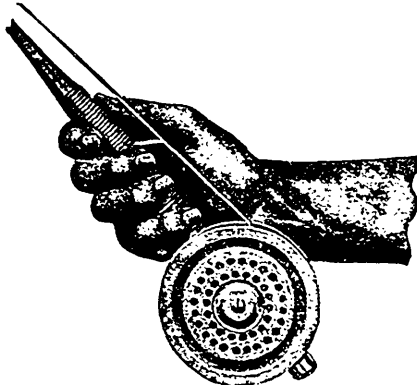
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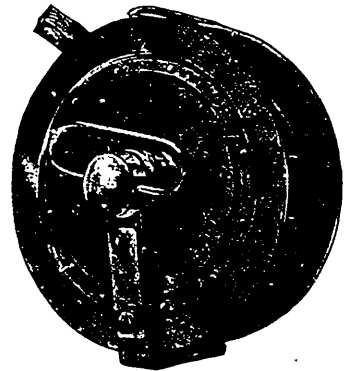
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