

EVENTS

Published Weekly.

Vol. 8, No. 7.

OTTAWA, AUG. 12, 1905.

Whole No. 333

Conscription and Militaryism in England.

IN his speech in the House of Lords, July 10, on the inefficiency of the British army Lord Roberts appealed "to the people" not to return any man to parliament "upon whom they cannot depend to make a study of the services the armed forces may have to perform." This is a new qualification for civilian members of the House of Commons. Economic questions, education, the housing of the poor, the conciliation of Ireland, and the numerous questions affecting agriculture—studies of these or any of them is beneath a soldier's notice. Field Marshall Roberts concluded by advocating a Reserve that would include "the manhood of the country generally", and he left it to the people to say "whether this should be brought about by conscription or by some system of universal training". By the way what is the difference? He wanted the people to "identify themselves with the Army" as

did the people of other countries. The other countries are, of course, Germany, from whose system 2,000,000 fled to America twenty years ago and have steadily been fleeing ever since, France whose material prosperity has been retarded by bloody and costly wars; Austria, whose parliament is an object of ridicule throughout the civilized world, and others that might be named. Napoleon would have a military empire as had the Romans, but England has grown great and rich with an empire where industry and commerce and individual rights and internal reforms received the chief attention of the people, of parliament, and of governments led by the best and wisest statesmen of the Victorian era. an era described by historians as the most glorious the world has ever seen. That Canadians may have an opportunity of reading Earl Roberts' speech in full we propose to reproduce it next week.

The C. P. R.'s Latest Acquisition.

THE Caledonia Springs property has passed from the hands of Mr. David Russell of Montreal into the hands of the Canadian Pacific Railway Company who took possession about the 1st inst. The property can be described as an extensive estate comprising nearly 600 acres. A long time ago, some fifty or sixty years maybe, mineral waters of medicinal value were discovered at this point and at that time

rebuilding the first story of stone was utilized and a superstructure of wood was erected. Last year Mr. David Russell, who then owned the place, spent a large amount of money in improvements, including a large brick wing at the back of the hotel. It is here that the visitor can take hot sulphur baths at any time of the day or evening. The sulphur spring is the foe to rheumatism and people from all



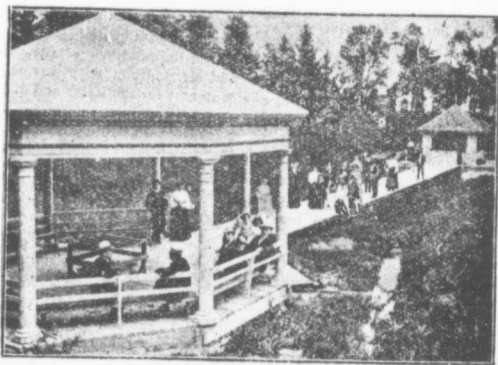
Glimpse of Hotel from Lawn

the resort was far more sought after than it is at the present day. The Governor-General used to drive up from Montreal and people from all the surrounding districts assembled there and famous trials of speed between rival horses were made on the race track then in existence but now only a memory. Many years ago a syndicate of Ottawa gentlemen, consisting of Mr. Arnoldi and others, built a hotel which still stands but in a rebuilt and renovated form. This hotel was burned down and in

points of the continent are attracted by its efficiency. Instead of the old wood inclosure around these natural springs they have been inclosed with concrete and piped out to one side of the pavilion erected over them where the waters flow through clusters of natural rocks. The approach to these springs is by granolithic walk from the hotel and, indeed, Mr Russell laid a granolithic walk all the way from the hotel to the railway station. Mr. Russell spent a large sum of money in mak-

ing many improvements and it is said received \$180,000 for the property. Mr. Russell made the hotel famous in political circles less than a year ago by giving his \$15,000 banquet with special trains and New York cooks and Hon. A. G. Blair presiding. The C. P. R. will doubtless show no less enterprise than Mr. Russell. In fact they are already constructing filters

hotels at different points across the continent, a policy adopted by some English railways and by some of the large railways in the United States. It is taken as an accepted fact that wherever the C. P. R. have a hotel it is well equipped and well managed and the Caledonia Springs hotel promises to be no exception to the rule. It is understood to be the intention of the



Selzer and Saline Spring Houses

for the plain water pumped up to the hotel from the pond, as at present the table water is imported in casks from Montreal. Although the C. P. R. did not become possessed of the property until very lately, they opened the hotel on the 2nd inst. and at present there are 10 or 75 guests. The company appear to have adopted the policy of building or acquiring a system of

Company to connect the Springs with the Ottawa river by electric road, four miles in length. There is a shelving beach on the river suitable for bathing and it would afford opportunity for sailing and boating of all kinds. The lack of boating and bathing facilities is the main drawback to the making of the place a summer resort.

EVENTS.

Published Weekly

ARNOTT J. MAGURN, Editor.

VOL. 8

AUG. 12, 1905

No. 7

THERE was a debate in the British House of Commons on the new Transvaal constitution but it was not very satisfactory. The truth is that the House of Commons is discussing a sham constitution created by a government that has no right to hold office. Everything about the constitution in the Transvaal and the Government at home is provisional and fugitive. Mr. Lyttelton found an ingenious justification for his constitution, in the argument that the detestation with which the independent British and Boers alike regard Lord Milner's government and system has served to reconcile racial feuds. There is nothing new in the suggestion and remark has been made before, on the success with which the Government had succeeded in combining the Boer farmers and the British artisans. But it is novel coming from a Colonial Secretary. Perhaps the most important speech was Mr. Chamberlain's. Two years ago Mr. Chamberlain said there was no danger to Imperial interests in giving self government to the two new colonies. On Thursday he attacked the government on two grounds. He said the Government had gone too far in its concessions in this constitution, and that the experiment would have been far better tried in the Orange River Colony. His remarks on this subject, and the praise he bestowed on the Boer administration in the Orange Free State are the most complete vindication of General de Wet's complaints. The Boers will not find anything in the speeches of British politicians which they cherish more carefully for purposes of controversy than this important admission by Mr. Chamberlain.

IN the House of Lords, the Duke of Devonshire made "one more attempt to dis-

cover to the opinions of which sections of their nominal followers His Majesty's Ministers at present inclined," by moving two resolutions, namely, "that this House disapproves of any proposal to establish a general or penal tariff," and "that this House disapproves of any system of Colonial Preference based on taxation of food." He was, of course, unsuccessful, though he spoke with unusual warmth about the manner in which an attempt was being made to commit the country to Protection through the Colonial Conference. He analyzed the relations of Mr. Chamberlain and Mr. Balfour with scarcely concealed contempt for the latter and unconcealed resentment against the former. His resolutions, he said, were intended to afford to the Government simple and effectivemeans of asserting whether they were prepared to stand by their own policy. The most significant speech in the debate was that of Lord Robertson, who said that as a loyal member of the Tory party he had a right to know whether the party was to be ruined by being secretly identified with a general penal tariff. It was hard to discover, he said, how the Unionist tenure of office was justified in the eyes of men of honor. There was now a vast amount of irresponsible and speculative wealth anxious to interest itself in our politics. To introduce a ruinous system of corruption was not fit work for the Tory party. He spoke eloquently of the degeneration in the "Arthur Balfour whom twenty years ago he remembered with enthusiastic admiration." Lord Grimthorpe spoke strongly of the Government's manoeuvres to stifle discussion. The debate was carried on by Lord Goschen, Lord Ridley and Lord Spencer. Lord Lansdowne spoke without saying anything in particular except the diplomatic sentence that his party intended to stand by its supporters so long as their support was given, and the previous question was carried by a majority of 64.

WE propose to have something to say next week with respect to the Contagious Diseases Hospital in Ottawa, which is owned by the taxpayers and ad-

ministered by them through the municipal authorities.

WHILE the Governor General was opening the Macdonald school in Charlottetown Sir William Macdonald was taking the waters at a health resort. By reason of his benevolence he deserves to live many years. Indeed he is as spry on his feet as any young man, although 72 years of age. He has never smoked, notwithstanding the fact that he made a large fortune as a tobacco manufacturer, and never drank spirituous liquor. The opening of this school at Charlottetown recalls the fact that Sir William is a native of the Island.

DURING July Great Britain's imports increased \$19,000,000, and exports over \$15,000,000, or an increase of total trade in the one month of \$34,000,000. Yet Mr. Chamberlain's chief argument for the imposition of taxes on foodstuffs was that Great Britain's trade was going to the demnition bow-wows. In Canada an increase of trade benefits the government of the day, but, under the conditions created by the extraordinary agitation initiated by Mr. Chamberlain it takes away from the protectionists their chief standing ground.

THE King of England reviewing the fleets of France and England and the unprecedented admission of the French fleet into Portsmouth harbor must have been an interesting sight, as it is historical.

HIS Serene Highness Prince Louis of Battenburg with his squadron of the British navy arrives at Quebec to-day (Saturday). Preparations for his reception and entertainment are on a magnificent scale, as Quebec city always knows how to do things. Society of course is in a flutter and if anybody of consequence is omitted from the list of the invited there will be Cain to pay. It is to be hoped that His Serene Highness has been training for the grand ball that is fixed to take place on Monday evening. If he is physically unable to dance with all the ladies who wish for the honor he will cause many disappointments. Or he might take a leaf out of the note book of the Governor-

General and act by deputy. But who would care for a vicarious dance?

HOW history can be falsified by those who profess to be its reliable exponents is shown in the issue of the Toronto Weekly Sun dated July 26. It says: "Mr. Borden and his followers fought against fettering the new provinces of the west in the matter of education." It will be remembered that the government's education clause "fettered" the new provinces by continuing in force the system established by the people of the new provinces themselves. Mr. Borden "and his followers" fought against that, says the Sun. Parliament had not been a week prorogued before the people were told that the organized Opposition fought for the Ontario or Toronto view. On the contrary when he rose to speak on the motion for the second reading Mr. Borden tacitly admitted that the Opposition was disorganized by announcing that he spoke for himself alone. Members of the Opposition from Ontario voted against Mr. Borden. Members from Quebec, staunch Conservatives, voted against Mr. Borden. Finally the individual members of the Opposition opposing the "fettering" were putting the Conservative party in such a hole that the Montreal Gazette felt constrained to advise them to quit before they made bad worse. In writing history we must not slur the facts, as does Dr. Goldwin Smith himself in the same issue of his paper when he says that the whole Parliament was bribed by an increased indemnity to pass the Autonomy bills.

ACCORDING to an editorial paragraph in the Montreal Gazette of the 9th inst. the time for the withdrawal of the British garrison from Halifax has been postponed to Sept. 15. Parliament had voted the money to pay Canadians to replace the British regulars, but the same authority says that the Canadians are not anxious to enlist for garrison duty. This reflection on the imperialistic spirit which so many persons are anxious to cultivate, is followed by another paragraph estimating that 16,000 men will be required from

Eastern Canada this year to help the farmers of the Canadian Northwest to get in their harvest. The question arises whether the men of Eastern Canada will be better employed eating up taxes within the stone walls of a barracks or in adding to the wealth of the country and to its prosperity by producing from the rich soil of the prairies the food so much needed by those 12,000,000 of poor which statistics prove exist in England, uncertain as to where their next meal will come from.

ACCORDING to the Statistical Year Book for 1904, just issued by the Department of Agriculture, there are one and one half persons to the square mile in Canada. That other half is badly needed.

ONE need not share Mr. Kipling's political opinions to regret the failure of his inspiration. Indeed, only those who do not share his opinions can understand why his inspiration has failed. For the fact is that these opinions could inspire no poet, not even one so persevering as Mr.

Kipling. He has lately published, for instance, a poem in praise of Lord Milner. Now, it is possible to praise Lord Milner's achievements in a leading article—in indeed it has been done—but not in poetry. To do that would be to practice art for art's sake indeed. So Mr. Kipling has been forced to talk not about Lord Milner but about things, or rather about words, in general. It is only from the title and the preliminary quotation from the Times that we are able to guess what the poem is about. Having read the quotation, we can see that the poem is an heroic attempt to versify it, but the prose is both shorter and more lucid than the verse. Indeed, Mr. Kipling takes fifty six lines of verse to say what the Times says in five lines of prose, and never succeeds in saying it. If he wishes ever to be a poet again he must first give up being an Imperialist; for he proves that the two are incompatible every time he publishes a fresh copy of verses.



■ At Coal Creek

Napoleon : the First Phase.

NAPOLEON, like Shakespeare has become the prey of the archæologist. Every fact which bears upon his life, however trivial the fact, however remote the bearing, is gathered up, treasured, and passed into the currency of public print. Even in his own lifetime there was a rage for Napoleonic relics. The washing accounts of the Emperor would command a price in the market. A scrap of his most execrable handwriting is as good as a bank note. His nurse, his schoolmates, his pedagogues, his Corsican cousins, his brothers, sisters, parents, ancestors, have come under the relentless microscope of the archæological explorer. M. Masson, who may be regarded as the high pontiff of the cult, chronicles his loves, and the number of Josephine's pocket handkerchiefs and the price of Jerome's first case of razors. Baron Lambroso publishes a periodical entitled *Miscellanea Napoleonica*. M. Chuquet investigates the early life and gives his results to the world in three stout volumes. Lastly comes Mr. Oscar Browning, who presents to English readers a compact serviceable account of Napoleon's life up to the Siege of Toulon, based upon the *Napoleon Inconnu* of M. Masson and the *Jeunesse de Napoleon* of M. Chuquet.

Mr. Browning is one of the elect, and, though not here concerning himself either with panygeric which would be tiresome or with psychological analysis which would be interesting, is clearly of opinion that every detail of his hero's early life must arrest the attention of his readers. He writes, in other words, rather as the archæologist than as the historian, noticing the small, external, and insigni-

ficant facts as well as those which are immediately relevant to history, and, above other things, aiming at a plain and succinct objective record. The result is a story, perhaps a little dry and overloaded, but exact, clear and trustworthy. As the first English presentation of the result of recent continental research Mr. Browning's book is likely to find many readers.

The *Napoleon Inconnu*, a most curious collection of youthful Napoleonic writings, is the chief source from which we derive our knowledge of Napoleon's early moral development. In these boyish note books, pamphlets, and literary exercises we see the ardent and exact student, the romantic rhetorician, his style influenced by Raynal and Rousseau, the cool judge of human character, the keen artilleryist, the wary politician developing out of the heady enthusiast. The wonderful analysis of his elder brother's character, written at the age of fourteen, shows the boy's precocious insight into the human heart. The "Soupir de Beaucaire," a strange dialogue composed just before the Siege of Toulon, shows the subsidence of romantic sentiment and reveals a new capacity for cold, trenchant political judgment based preeminently upon military considerations. To these documents, the first cited in full, the second analyzed, Mr. Browning has added in an appendix three very striking pieces, a violent tirade in favor of Corsican liberty composed in Napoleon's earliest style, a meditation on suicide, and the famous "Rencontre au Palais Royal," a story of an interview with a woman of the town, so vivid, brief and penetrating that the greatest masters of French realism might own to it with

pride. Even the crudest writings of Napoleon are more interesting than the correspondence of Henry Dundas. Here, for instance, is a specimen of the early Napoleon, as rendered by Mr. Browning.

"The lover grown to manhood is mastered by ambition—ambition with pale complexion, wandering eyes, hurried gait, irregular gestures, sardonic smile. Crimes are his playthings; intrigue is but a means; falsehood, calumny, backbiting but an argument, a figure of elocution. He arrives at the helm of affairs; the homage of the people wearies him; but he can do no good. What can be more consoling to the nerves than to say 'I have just assured the happiness of a hundred families: I gave myself trouble, but the State must go the better for it; my fellow citizens live more quietly by my want of rest, are more happy by my perplexities and more gay by my sorrows.' The man who desires to succeed only from the wish to contribute to the public happiness is the virtuous man who feels that he possesses courage, firmness and talent."

Among the incidents of Napoleon's early career is a story which Mr. Browning contributes as follows:

"Whilst at Auxonne he was put under arrest, but the reason is not known. In 1806 he met a Captain Floret and said to him 'Do you remember that at Auxonne Sergeant Floret was put in prison for a week and Lieutenant Bonaparte for twenty four hours?' 'Yes, sire,' replied Floret, 'you were always more fortunate than I

was.' He was shut up in a room with an old chair, an old bed, and an old cupboard, and on the top of the cupboard was an old worm eaten book, a copy of the Digest. Napoleon, having no paper or ink, devoured the one book at his disposal, and the knowledge of it thus gained proved useful to him at a later period when he was drawing up the Code Napoleon."

According to another version, the book in question was the Institutes, but whether it was the Institutes or the Digest matters little. In any case, Napoleon's legal equipment was that of the amateur, improved though it was by snatches of reading during the Marengo campaign and by after dinner talks with Tronchet and Portalis while the Code was passing through the Council of State. He was, however, through the period covered by this volume developing upon wide and original lines. He was an attentive student of physical geography, history and the military art. He had outgrown Christianity and Rousseauism and the insular enthusiasm of the Corsican patriot; he had mixed actively in civil turmoil; he had read the *Esprit des Lois* had been carried away by Paul et Virginie; had passed through Raynal and Plutarch; had conceived a passionate admiration for Corneille and Racine. Casting off the picturesque but unprofitable role of the Corsican patriot, he had thrown in his lot with France. It was always, as Mr. Browning's book abundantly shows, his instinct and his maxim to be upon the winning side.



EVENTS.



The last Russian battleship in the battle of Korean Straits going down.

Canada's Canal System.

BY M. M. WILNER.

The following article was written by a citizen of the United States for a United States publication, and although it discloses an industrious study of the subject as a whole, it also reveals a lack of intimate acquaintance with Canada's canal system. For instance it merely slurs over the most magnificent chain of canals and deepened and straightened channels on the continent, namely the St. Lawrence system from Prescott to Cornwall. However, we thought it worth reproducing as it is. He says:

PROBABLY no one has ever looked at a map of North America without noting the commercial possibilities offered by the wonderful chain of waterways that reach from the Atlantic coast into the very heart of the continent. Aside from the great fall at Niagara nature has interposed only half a dozen rapids to interfere with the navigation of this remarkable system. Projects for overcoming these obstacles have been entertained ever since the occupation of the country by white men. The first canals built were designed to accommodate only bateaux, which were flat bottomed, and drew less than one foot of water. The locks were 6 feet wide and 30 feet long with 2½ feet of water on the sills. The remains of one of these canals may yet be seen on the south bank of the St. Lawrence at Point au Buisson. In 1804 they were enlarged to give a depth of 4 feet of water in the locks. They then admitted boats of 35 tons cargo, which was their capacity during the War of 1812. Military necessities gave an impetus to canal

building at that time, but the work languished after the return of peace, and it was not until Canada had become a self ruling province that the enterprise of operating the St. Lawrence was prosecuted with energy and carried to completion.

Today it is possible for a vessel drawing not more than 14 feet of water to steam from any ocean port in the world direct to Duluth or Chicago. In order to utilize the entire 2,884 miles of this water route it has been necessary to build only 73¼ miles of canal. The difference in level between Lake Superior and the tide water which is 602 feet, is overcome by 48 locks having a total lift of 551 feet. Nearly \$90,000,000 has been spent in the construction and improvement of these canals, and about \$20,000,000 more in their maintenance.

Few people who have not traveled upon it realize the great length of the St. Lawrence River. Its mouth is the Strait of Belle Isle, between Newfoundland and Labrador, that being the channel commonly used by vessels sailing to and from Europe. It is 826 miles from this strait to Quebec, and 986 miles to Montreal. Montreal is therefore nearly as far from the ocean as the mouth of the Ohio River is from the Gulf of Mexico. Yet it is classed as an ocean port. Not only is it accessible to any ordinary steam vessel, but the tides of the Atlantic come to within a few miles of the city. This long channel always has been navigable for vessels drawing not more than 10 feet of water. Since 1888 the shoals between Montreal and Quebec have

been redged to a minimum depth of $27\frac{1}{2}$ feet, making a submerged canal $39\frac{1}{4}$ miles long, which may properly be considered the first section of the Canadian canal system. Just above Montreal are the famous Lachine rapids, the most turbulent in the river. Here begins the first of the canals proper. It is named the Lachine. It cuts across a bend in the river for a distance of $8\frac{1}{2}$ miles, overcoming a rise of 45 feet with five locks. It was first planned by Sir George Provost in 1815 as a military work, but was not completed until 1825. At that time the depth of water in the locks was only $4\frac{1}{2}$ feet. It has been twice enlarged since then. Two of the locks now have 16 feet of water, and the others 14 feet, which is the governing depth of the entire water route to the Great Lakes. Above the Lachine Rapids the river broadens out into what is named Lake St. Louis. Sixteen miles further up is a succession of rapids named the Coteau, the Cedar and the Cascade. To overcome these the Beauharnois Canal was built in 1845. It runs for 12 miles along the south bank of the river, and has 9 feet of water in the locks. This canal, however, has given way to the march of improvement. In 1892 the Canadian Government began the building of the Soulanges Canal, on the north side of the river, and since its completion, seven years later, the old Beauharnois has been abandoned for navigation purposes, though it is now maintained as a power canal. The Soulanges is the newest and embodies the latest engineering ideas of any of the Canadian canals. It has been termed the most modern canal in the world. It has cost nearly \$7,000,000 which is at the rate of about \$500,000 a mile. since the channel is 14 miles long. In this reach there are only two slight curves. The fall of 84 feet, which in the old Beauharnois required nine locks is overcome in the Soulanges by four locks, each having a lift of $23\frac{1}{2}$ feet. These are operated by electricity, which is generated by the power developed at the locks themselves. The same power furnishes electric light which makes the channel navigable at night. The canal is 100 feet wide at the bottom and 164 on the surface, and has 15 feet of water on the

lock sills. A fine macadam highway runs along its bank. Highway bridges swing from the shore, dispensing with piers in the centre of the channel. One of the difficulties encountered by the engineers was the crossing of three streams which discharge into the St. Lawrence along the canal route. These have been depressed and are carried under the channel through several 10 foot tubes.

A stretch of 13 miles of open water through Lake St. Francis leads to the entrance of the Cornwall Canal, which overcomes the Long Sault rapids, the most difficult of any in the river except the Lachine. This canal was built in 1843 to accommodate boats of 9 feet draught. It has been rebuilt since 1890, bringing it up to the 14 foot standard. The old 9 foot locks are yet maintained, however, for light tonnage. The new locks are 270 feet long and 45 feet wide. Six of them are required in a channel 10 miles long.

The three remaining artificial waterways along the St. Lawrence are known as the Williamsburg canals, though there are several miles of river channel between them and each has its own name. The first of these is the Farran's Point Canal, one mile long. Here a new lock 800 feet long has been built. It is capable of taking an entire tow at a time. Ten miles further up the stream is the Rapids Plat Canal, $3\frac{1}{2}$ miles long, with two locks of the standard type, and 4 miles further on is the Galops Canals with one guard and two lift locks, one of which has been carried out to a length of 800 feet. This canal is in two sections—the Iroquois and the Cardinal. They are two separate canals, but are connected by an embankment which makes a channel known as the Junction Canal. The total length is $7\frac{1}{4}$ miles. The Cardinal section has been cut through a high bluff on which stands the town of Cardinal. The government bought a part of the town and moved it out of the way. This cut is 68 feet deep at its highest point, and is 5,900 feet long. Its slopes are protected by masonry, making it one of the most interesting points along the entire route.

The whole St. Lawrence system has 43

miles of artificial channel and 26 locks, the total distance from Montreal to Kingston being 188 miles. There is one canal along the north shore, the Murray, giving a passage 5 miles long between the western end of the Bay of Quinte and the lake. This is used, however, for local traffic.

By far the most famous of the Canadian canals is the Welland, though it is of less importance to Canada than those along the St. Lawrence. This is shown by the fact that the quantity of freight passing up and down the St. Lawrence is a third greater each year than the quantity going through the Welland. Moreover, two thirds of the vessels that use the Welland are under the flag of the United States, while on the St. Lawrence canals is three fourths are Canadian. The Canadians, however, had connected Lake Erie and Lake Ontario with a canal of sufficient dimensions to accommodate the lake vessels of that day, while the St. Lawrence was closed to everything but batteaux, and this canal had reached the 14 foot depth twelve years before the St. Lawrence channels had been opened to vessels drawing more than 9 feet. The Welland now extends in a nearly straight line from Port Dalhousie, on Lake Ontario, to Port Colborne, on Lake Erie, a distance of $26\frac{3}{4}$ miles. In this short channel there are 25 lift locks, and one guard lock. The drop overcome is $326\frac{3}{4}$ feet. More than half the entire difference in elevation between Lake Superior and the Lower St. Lawrence is encountered in this Welland peninsula. The locks are of the standard 14 foot depth, to which they were enlarged in 1887, and are 270 feet long and 45 feet wide. In addition to the main line of the canal the government maintains the old channel for $11\frac{3}{4}$ miles, from Port Dalhousie, southward, with a depth of $10\frac{1}{4}$ feet. At Port Robinson a junction is formed with the Chippewa or Welland River, which flow westward into the Niagara, just above the Canadian rapids. With two locks overcoming a drop of but 10 feet, a navigable channel 9 feet 10 inches deep is maintained by way of this river to the Niagara, but it is not much used. Another 9 foot branch runs to Port Maitland, a few miles up the lake

from Port Colborne, connecting with the Grand River, which thus becomes the principal feeder for the main canal.

The Welland Canal completes the water route from the ocean to the interior lakes, but there is one other important link in the chain, which was built, not because of an actual necessity, but to satisfy the desire of Canadians to have a through channel from Lake Superior in their own territory. This is the Sault Ste Marie Canal, connecting Lake Superior and Lake Huron. The canal is $1\frac{1}{2}$ miles long, and consists of a single great lock 900 feet long and 60 feet wide, with 20 feet 3 inches of water. It has cost more than \$4,000,000. It is a trifle longer than the lock on the American side, but it is of less width, and the American lock takes vessels of 21 feet draught. The American lock is the largest in the world. The two locks pass more tonnage each year than any canal in the world. The proportion of the Canadian lock is from one fifth to one fourth of the total each season.

The only remaining ship canal in Canada is a stretch about half a mile long at Cape Breton, Nova Scotia, connecting St. Peter's Bay with the Bras d'Or lakes. There are three barge systems, however, which deserve some attention. One of these has a special interest for Americans because it forms part of a complete water route, over 490 miles long, from Montreal or Quebec to New York. This is the Richelieu and Lake Champlain system. It extends from Sorel, at the confluence of the Richelieu and St. Lawrence rivers, to the international boundary. The distance is 81 miles. The natural channel of the Richelieu river is used for the greater part of the way. There are a dam and a lock at St. Ours, 14 miles south of Sorel, and 20 miles further south the Chambly Canal begins, running for 12 miles along the river bank. There are nine locks in this canal. The governing depth is 7 feet, which corresponds with that of the present Champlain Canal from Whitehall to Troy, though the Champlain must be deepened to 12 feet in a few years.

A more important system, as regards commerce, follows the Ottawa River from

its mouth, a few miles above Montreal, to Ottawa, 119 miles. This is river navigation except the Ste. Anne locks at the head of Montreal Island, and the Carillon and Grenville Canal, 71½ miles long, which contains 9 foot locks. At Ottawa connection is made with the Rideau Canal, stretching south westward 126 miles to Kingston, at the foot of Lake Ontario. About a half of this waterway is artificial, the Rideau and Catarqui Rivers furnishing the remainder. There are 35 locks, but only 14 of them are used on the down trip. The governing navigation depth is 4½ feet.

There is a remarkable chain of natural waterways forming a most complete connection between Georgian Bay, the eastern projection of Lake Huron, and the Bay of Quinte, which is the northern projection of Lake Ontario. It extends up the Trent river and through a succession of lakes to Lake Balsam, thence to Lake Simcoe, and down the Severn River to Georgian Bay. The distance is 216 miles, and the only gap is the 18 miles between Lake Balsam and Lake Simcoe. This is named the Trent navigation system. About 66 miles of it are now unnavigable. Only about 20 miles of actual canal would be needed to open the route. Work now under way makes a continuous channel, 160 miles long from Heeley's Falls, 43 miles above Trenton, to Lake Simcoe. Only the terminal reaches then have to be improved to change the Trent system from an interior to an interlake waterway, which, the Canadians hope, must prove a strong rival to the Erie Canal. The distance from Lake Huron to the St. Lawrence River by way of Lake Erie and the Welland Canal, is over 500 miles, so there must be a saving of about 300 miles by the new channel. The Trent system is not to be a ship canal as has been erroneously stated by some American papers. The governing depth of water in the locks is 6½ feet. Moreover, the difficulties that have to be overcome are such that it is improbable that a ship canal can ever be attempted by this route.

The Trent system has become famous among engineers for the lock at Peterborough, about 100 miles northwest of Treu-

ton. This lock, which is of the hydraulic type, makes a direct vertical lift of 65 feet. It is the only one of the kind on the continent, and the largest in the world. Two water tight steel boxes, each holding 1,300 tons of water ascend and descend between three great guide towers 100 feet high, built of solid masonry. When one chamber is up the other is always down. A boat enters a chamber; the gates are closed; a little additional weight of water is introduced into the other chamber and the boat rises swiftly to the higher level, the operation being almost automatic. Only three minutes are required to make the lift, and the entire lockage is accomplished in about 12 minutes. The lock accommodates a barge of 800 tons. It was completed in 1903, at a cost of \$500,000. A similar lock, with a lift of 55 feet is to be begun this year at Kirkfield, between Lake Balsam and Lake Simcoe.

There is another possible water connection between Lake Huron and the St. Lawrence which is said to afford a practicable route for a ship canal. This is by way of Lake Nipissing and the Mattawa and Ottawa rivers. The total distance from Georgian Bay by this route is 430 miles, which would be some 300 miles less than the present route by way of Lake Erie. A survey and favorable report was made as long ago as 1856. G. Y. Wisner, a Detroit engineer, stated before the United States Merchant Marine Commission that a 30 foot canal along this line could be built for \$80,000,000, with only 40 miles of canal and 74 miles of improved river navigation, the remainder being natural channel. In practice, however, it would not pay to send costly lake or ocean vessels through such a long and narrow inland waterway.

Another project which has been discussed is to build a ship canal from Georgian Bay directly to Toronto. The distance is about 70 miles, which is nearly the length of the course now used by lake vessels from Lake Huron to Lake Erie through the St. Clair River and lake and the Detroit river. The work, however, would be expensive and the commercial results doubtful.

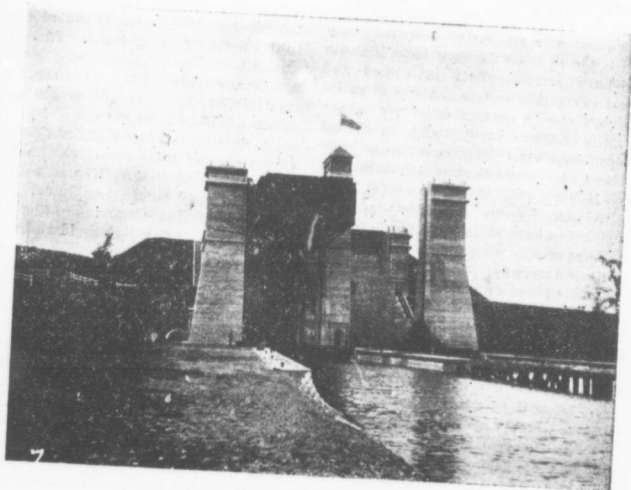
Taken as a whole, the Canadian canals

EVENTS.

represents a very creditable degree of enterprise. As commercial competitors with other trade routes, they claim their share of commerce, and they must always have a healthful, regulating effect on freight rates. They transport about one third more through freight each season to Montreal than is carried from Buffalo to New York by the present Erie Canal. Montreal's grain receipts by both lake and rail in 1904 were about one fifth those of Buffalo by lake alone. The typical boat using the Welland and the St. Lawrence canals is 247 by 42.6 feet. Such a boat can carry 68,000 bushels of grain or 3,000 tons of iron ore. The newest lake boats run as high as 569 feet in length and 56 feet beam. The trip down the St. Lawrence

has some advantage over the return voyage, inasmuch as vessels have to use only the Cornwall, Soulanges and Lachine canals. The rapids opposite the other canals can be run easily. The rapids are run by passenger steamers built for the purpose. But this is done to make the trip more interesting to tourists. A great disadvantage of the route is the high insurance charged on vessels traversing the Lower St. Lawrence. Through voyages from the ocean to the upper lakes have not proved profitable.

But while the expectations of visionary people have not been, and probably never will be, realized, the Canadian canals amply repay the cost of building and maintaining them.



The Lift Lock at Peterboro

Winning a Battle by Telephone.

THAT the Japanese victory at Mukden was won by skilful use of the telephone is asserted by M. C. Sullivan. He believes that if the results had depended on mere bravery the issue might hang in the balance, and that it has been through the superior use made by the Japanese of ordinary devices of commercial and social life that they have been successful at every turn. He writes:

"One of the most remarkable events that has occurred in the world's history is the battle of Mukden, remarkable because it was the mightiest land battle ever fought, and startling because no victory was ever won by such scientific methods. Feats were accomplished by the Japanese never before contemplated in war, and which had been previously declared by military experts to be impossible. The success of the victorious forces was almost entirely due to the skilful use of what is today considered to be one of the most ordinary and commonplace among electrical instruments—the telephone.

"Formerly a large battle was to a certain extent a haphazard, hit and miss affair, the careful foresight of the most skilful general failing to take into account the many accidents and incidents which would in almost a moment alter the entire aspect of things and change a successful movement into an utter failure. Not so now, however, as by means of the telephone it is possible for the commanding officer to keep in touch with each individual unit of an enormously large army, and thus to make the best use of every portion of it, thereby obtaining the greatest possible effect with the least expenditure of energy."

That the battle of Mukden furnishes a particularly good example of such use of

the telephone is asserted by Mr. Sullivan. It was the belief of the Russians that the Japanese would not fight in the open. Playing on this belief Oyama used a movement through the mountainous country to the south and east to mask a flanking movement through the plains west of the city. To do this, his forces were disposed in a crescent ninety miles long and divided into five sections, each of which was in telephonic communication with the general staff. The Japanese General thus had his entire army in perfect control and operated it as a huge machine effecting his purpose and gaining a decisive victory. Says the writer:

"From the subdivisions of each portion of the army telephone lines were run to a portable switchboard, and from the various switchboards trunk lines were run to headquarters several miles to the rear. Thus the parts of each portion of the army were made to correspond with the subscribers of a telephone station in a large city the headquarters being analogous to the central station, to which the subsidiary stations are connected by trunk lines. . .

"The rapidity with which the Japanese established telephone communication was remarkable. Lines were laid in advance of the main body of troops, even when the army was advancing by forced marches, and perfect connection was maintained between the different divisions. Wherever the conditions permitted the reels of wire and the instruments were carried in wagons. The line was laid on the ground as rapidly as a horse drawn vehicle could advance. If the line so laid was to become permanent a detail came after the wagons at leisure and attached the wire to trees or hastily erected supports.

EVENTS.



Montmorency Falls in August as Prince Louis will see them.