

Canada at War

NO. 6—FIELD GUNS

By C. Earl Rice, formerly of The Springfield Times, Leo De Bonnet, Montreal

One of the most interesting stories concerning our war effort, deals with the production of 25-pounder field guns.

Shortly after the outbreak of war, a firm in the Province of Quebec, was asked to undertake the manufacture of 25-pounder field guns, for the British and French Governments.

The inside of the barrel is given two boring operations, which require 22 hours. After this it is honed for 5 hours. The outside diameter is then turned again, taking 10 1/2 hours, following which, both ends are threaded, for the autofrettage test, this operation also taking 10 hours.

The plant, in the heart of Quebec Province, consists of three large, modern, light alloy buildings, with a total floor space of 600,000 square feet. The complete gun and carriage is made in this plant.

Of the 2,111 men employed, about 75 per cent were recruited from the district immediately surrounding the plant. The rest are from various large cities in the province. There are also more than a hundred young women who do inspecting of various operations. In the apprentice school 375 men are being given training in specialized work to take care of further expansion.

The steel for these guns is made right in the plant from scrap metal. The scrap pile looks like a small mountain and several thousand tons are piled up at the present time. A huge press, which exerts a pressure of 2,000 tons, squeezes the ingot until it is brought to the desired size and length. The ingot is then shaped on a huge forge.

The approximate weight of a rough barrel forging is 2,470 pounds, and the approximate weight of a finished barrel is 420 pounds. The operations through which the barrel passes from the rough forging to the finished article are many and varied.

Following the heat treatment, the barrel is tested for physical proper-

ties, and if satisfactory is passed by inspection. A sample must be cut from the barrel and sent to the lab for testing.

Seldom is a gun barrel cut to the desired length in one operation. If the barrel were cut to length in one operation, and a subsequent heat treatment required another sample for testing, there would be no way of obtaining it.

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Autofrettage is in many respects the most interesting part of the whole process. It is the activity, the physical properties of the gun steel are raised beyond those which could be obtained by heat treatment. Four gauges are placed around the barrel, two near the breech end, one in the middle, and one at the muzzle end.

The size of the barrel is measured at these points down to one ten-thousandth of an inch. Both ends of the barrel are then plugged, and through the breech end glycerine is pumped into the barrel by a high pressure pump, until a pressure of 20 tons to the square inch is attained. Readings are then taken of the gauges on the outside of the barrel. If there is no indication of strain or undue stretching, the pressure is then brought up to 24 tons, then to 28, then to autofrettage pressure varying between 28 1/2 and 33 tons.

It is impossible to use water for these tests, as water freezes at pressures as great as those used. Under the extreme pressure, the outside of the barrel will expand by as much as 2 to 20, ten-thousandths of an inch. This test is important because it checks any weakness that might cause the barrel to expand unevenly throughout its length, when the gun is being fired.

The carriage for the gun is built on assembly line methods. Each man does his one job, and the carriage is then passed on to the next operator. Unlike the motor industry, however, each operation takes a great deal of time. There is much work that must be done by hand, and the detail is very exacting, and often one operation requires several hours to complete.

The same care and detail that goes into the manufacture of the barrel, goes into the production of all the component parts of the gun. When the gun is completed and checked, it is sent to the proving grounds.

The Sunday School Lesson

FOR SUNDAY, JANUARY 4

THE SYNOPTIC GOSPELS: MATTHEW, MARK, LUKE

Golden Text.—Christ Jesus came into the world to save sinners. 1 Tim. 1:15.

Exposition.—I. Matthew's Declaration, Matt. 1:1, 17.

The New Testament begins with a record of the genealogy of Jesus which connects Him with Abraham. The ancestors of our Lord are given so as to connect Him with the long line of promises which began with Abraham when God said to him in Gen. 12:1-3. The only reason for the mention of the names of the successors is the part they had in preparing the way for the coming Redeemer of mankind. The promise given to Abraham was renewed to Isaac (Gen. 26:3-4), was confirmed to Jacob (Gen. 28:14), was confirmed in Judah (Gen. 49: 10) and was reaffirmed to David, v. 6, (2 Sam. 7: 12, 13, 16). It proves the purpose of God in His eternal purpose.

Mark begins his revelation with a perfect identification of Jesus with the Gospel. This answers the question as to what is the Gospel. Mark would say, "It is Christ, Jesus the Son of God." So would the Apostle Paul (Rom. 1:16). The Gospel is not a "plan," not a theology, not a denomination—it is Christ. The Gospel stands or falls on the Person of our Saviour. He is the Gospel for all He was and did and is so intimately identified with the Person of Christ that they are forever inseparable (1 Tim. 3:16; Heb. 7:25: 8:1; 13:8).

In verses 14, 15 we read that Jesus came "preaching the gospel of the Kingdom of God and saying, the time is fulfilled...repent...believe. How wonderful that He, as God's medium of redemption, should Himself bear the message of hope to sinful mankind. But this was necessary since He was not only God's incarnate Son but the revelation of redeeming love. To look upon Jesus was an unmeasured privilege and to hear Him speak His message of hope must have been an inspeakable blessing. Let us bear in mind that our best witness to Christ is made when we allow Him to rule our lives that others can see we are constrained by His love (2 Cor. 17:20).

III. Luke's Unfolding, 1-4. That the writer of this gospel, and the writer of Acts, is the same person, is shown by comparing these verses with Acts 1:1. That the writer of the Acts was the companion of Paul is shown by the fact that he is mentioned in the Acts as having accompanied Paul on his last journey to Jerusalem, and remained in touch with him during his two years' imprisonment at Caesarea, and went with him to Rome as evident from a careful reading of the Book of Acts, especially Acts 20: 5, 6, 13-15; 27:1, 2; 28:15, 16. The early Fathers of the Church agree that this writer and companion of Paul was Luke, who nowhere mentions his own name; but Paul three times in his epistles speaks of him as Col. 4:14; 2 Tim. 4:11; Phile. 24.

The Fathers also record that "Paul was Luke's instructor in the preparation of his gospel, and gave it his approval when finished. Some have conjectured that Luke was one of the two disciples to whom Christ appeared on the way to Emmaus (Luke 24: 13-32). Luke's gospel is written for the Greek (Gentile world) and in the laudable intention of all the four gospels, it is written to show the Son of man, the Friend of sinners, the universal Saviour.

IV. John's Testimony, 1-5. "The former treatise" is the gospel of Luke. The subject was what Jesus "began" to do and teach. The subject of the Book of Acts is what Jesus continued to do and teach (after His ascension). Just before the ascension He had given the disciples "commandments" (Matt. 28:19, 20; Mk. 16: 15, 17; Luke 24: 48-49). He had given these commandments after His resurrection in the power of the Holy Spirit. What an honor this put upon the Holy Spirit, and how it emphasizes the importance of His Work (1 Cor. 2: 4, 1 The. 1:5). Jesus was taken up "into heaven" (Luke 24: 51; 1 Pet. 3:22). The all-sufficient proof that Jesus rose, was that He was seen through forty days after His suffering and death. He showed Himself alive by many proofs.

100 Years of School History

This is the third instalment of the history of Acton Schools. Further instalments will appear in future issues of The Free Press. This sketch was compiled by Mrs. E. J. Moore for the School Record.

The first record of the present Acton schools appeared in 1861, when one acre was purchased for a new school ground from Sidney Smith for \$300. This part of the present extensive school plot. A right of way to the property was first changed, some time later, to the present entrance from the West, the Old School Lane. At first gates and turnstiles were provided at both ends of the lane, but with the passing of years these became decayed and were finally done away with.

A stone structure of two rooms was erected on this property, probably immediately after its purchase in 1862, a new four-room structure of brick of two stories, was built, facing the lane, at an expense of approximately \$5,000. Some years later, again, a second story was added to the old stone structure, which stood sturdily through the years, and additional stairways added as they are at present.

The local Public Library was housed for some years in a small room off one of the rooms of the school. In 1882 this was moved to a room in the Town Hall.

1884 was a marked year in the school history since a new well was drilled for drinking-water at an expense of \$95.24. And of even greater significance, a new bell, 28 inches in diameter, and weighing 220 pounds, was purchased and hung at an expense of \$4.

In 1892, when the school had become overcrowded, a room in the Town Hall, to serve the Primary grades, was utilized. Beginning in 1912, the old Baptist Church on Elgin street was similarly used for some time. Provision was first made for the writing of the Entrance examinations in Acton in 1901. The same year Continuation Classes, for the beginning of High School work, were inaugurated. The fees for the Continuation School were set then at \$5 for resident, and \$7 for non-resident pupils.

From time to time, as the demand for additional playground space became acute, various sections of the Sidney Smith property were purchased. In the course of years the Smith estate, with its fine stone residence and extensive grounds, with the stream coursing through the south side, had been transformed into perhaps the finest residential property in Acton has known. With the death of the father and mother, and the removal of the sons to other places, the house finally became vacant. For some time there had been a demand for more extensive High School privileges in Acton. And hence it seemed an advisable course, to purchase the remainder of the Smith property, including the residence, and to rebuild the latter into a High School. The property and expense of changes in the house was covered by some \$28,000. Notably, the addition of the new section of property provided a splendid and convenient new entrance from the South to the school grounds.

Using this new entrance the other day the writer remembered vividly the strong temptation there was, back in the nineties, when a fence and also a hedge protected the Smith property along the school lane, to go out through the gates, and the private property, making a dash down the hill past the big pond, to have a look at something strictly forbidden adding spice to the adventure. Occasionally when the temptation had been yielded to by enough of the boys to make the trespass noticeable, the "Master's Room" of the school would be visited by Colonel William Allen, father of Mrs. Smith, who lived in the home of Colonel Allen was a stern military man of the old school and he brought with him, invariably, on such occasions, on his shoulder, an old Snider rifle, which was used as a terrible threat of what might be done "if any more of you young villains go through my place." The threat was usually materially effective till the fear of discovery was off the day. Another short-cut of the school lane was home via the School Lane, led across a field of the Smith property at the rear of the School and across the dam on what was then "Henderson's Pond," now the property of Amos Mason. This route was especially liked because the most popular swimming-hole of that time was in a small bay in the pond directly behind the Storey Glass factory, approximately where Mr. Mason's two recently-erected new houses stand. It must be confessed that, on the warm days of late June, when the banking for the afternoon dip became urgent, most of us who followed that route began undressing so soon as we got out of the school grounds, and by the time we reached the Henderson property were usually carrying the two or three pieces of clothing then utilized to stow them in a crutch of one of the apple trees nearby. Bathing suits were not considered es-

Winter Ice Blue For Winter Bride

NEW YORK, (CP)—Here comes the New Year's Bride of 1942. In blue. Yes, blue. And wool at that. Of course, it's a winter ice blue. And the wool is as sheer as can be.

The heart-shaped neckline of her wedding gown is not so new, nor are the three-quarter sleeves. But that makes them smart.

The bride's bouquet is a modern fan formed, perhaps, as a timely version of a museum piece. (Museums are inspiring the designers—these days) Pale lavender and purple orchids fill the fan and create an effective cascade of color against the blue skirt of life-gown.

For travel the bride will take an American Beauty frock of fitted rayon to wear under her fur coat. Beige will be her accessory color for the red frock.

Sweaters for her trousseau include a light blue sounds like a favorite color for New Year's season of the most brides since First Great War days. But a black one and a winter white one go with her as well as resort wear. Her skirts contrast with the sweaters.

Feeding 50,000,000 Britain's Responsibilities in Middle East

Britain has made herself responsible for the welfare of 50,000,000 people in the Middle-East, supplying them from various sources with industrial raw materials, coal and oil for transport and public utilities, fertilizers for crops and foodstuffs—100,000 tons of cereals are now on their way there.

The work is carried out by the Middle East Supply Centre, which, with headquarters at Cairo, serves an area of 2,500,000 square miles, twenty-five times the size of Britain herself. The Centre co-ordinates the supply of all goods and makes the best possible use of shipping facilities: It works in close co-operation with the United Kingdom Commercial Corporation which has branches in ten countries—Turkey, Persia, Iraq, Syria, Palestine, Egypt and the Sudan, as well as in Spain, Portugal and Iceland. The Corporation has a representative on the Middle East Supply Centre, which in turn maintains close touch with Mr. Oliver Lyttelton, Minister of State in the Middle East, and with the Intendant-General of the British Forces in that region. Agents of the U.K.C.C. in Egypt, Iraq, Syria, Palestine, and South Africa have recently met in Cairo, under the chairmanship of Lord Curzon, to discuss the important questions of transport and co-ordination.

BRIDGE STRUCTURES ARE LONG AND HIGH

Steel and wooden bridges and trestles serving Canadian National Railways joined together would provide a crossing 132 miles in length and composed of 3,500 separate structures. Nothing under an 18 foot opening is classified as a bridge. The longest bridge on the Canadian National system is the Victoria Jubilee bridge spanning the St. Lawrence at Montreal, measuring 6,900 feet over steel. The highest is the Croix bridge, crossing the Fraser River which rises 2,200 feet from the level of the river to track level.

WAR 52 Years Ago

Court Group Murdered Mysterious Monk Who Exercised Strange Power Over Empress of Russia

BY H. H. GORDON Canadian Press Staff Writer Coming at a time when the political situation in the country was gravely disturbed by growing revolt against the secret autocracy that governed the Russian court, the murder of Rasputin, notorious "holy" man who throne, attracted world-wide attention 25 years ago.

Siberian-born Gregory Novik, to give him his real name, was shot to death by a group high in Russian court circles including the young Prince Yusupov, Grand Duke Dmitri Pavlovitch and one Purihkevitch, a conservative member of the Duma. The shooting occurred in mid-December, 1916, but did not become generally known until December 29. As a youth Novik appears to have been thoroughly disreputable and in the months immediately preceding the shooting was given him by neighbors. This stuck with him, but later in his life his peculiar and objectionable habits were taken as attributes of holiness.

Possessed of hereditary hypnotic power, Rasputin gradually wormed his way into influential quarters after devoting himself to religious exercises. A venerator of piety at this time covered the habits which he had acquired in his youth and he exploited to the fullest extent his strange magnetic power, the influence of which was admitted by even his bitterest opponents.

In Russian Court it was in 1907 that he gained introduction to the Russian court through the archbishopric Eufan, rector of the theological academy and confessor to Empress Alexandra Feodorovna. There Rasputin, who had become known as a monk, found a sterile field for his peculiar powers. The Empress, influenced by mysticism, was in constant fear for the health of the young Tsarevitch, who suffered from hemophilia. Rasputin, presumably by virtue of his hypnotic power, apparently had some part in the Tsar's improved health at the time, and this gave him a commanding influence over the empress.

Stories of wild orgies and debauchery in high circles were common chatter in all classes of Russian society, but through it all Rasputin maintained for himself a strong place in court. At the same time he incurred bitter enmities. Members of the Imperial family from time to time unsuccessfully tried to shake his influence with Emperor Nicholas and the empress. The group responsible for his death regarded themselves as executioners rather than murderers and Prince Yusupov and Grand Duke Dmitri were excused. Rasputin's body was taken to the Imperial Summer Palace at Tanjkoie Selo and buried in a silver coffin. It is said the empress frequently prayed at his grave.

He Sure Earned His B.E. Medal

LONDON, (CP) A young airman, Sgt. Clarence Wilkinson, who saved an R.A.F. bomber's crew when it came down in the North Sea has been awarded the British Empire Medal for bravery. After the bomber hit the water Wilkinson—

Sent out an SOS, unstrapped the captain and helped him through a hatch, dragged out an unconscious navigator, jumped into the sea and helped the rear gunner launch the dinghy, righted the dinghy when it turned upside down and then helped the other members of the crew into the boat.

Two small British boys were gazing at the shop windows decorated for Christmas. Presently they came to a butcher's shop, and one of them pointed to a number of hams hanging from a large holly branch. "Look, Tom," he said, "Look at them 'ams growing up there."

"Get away," said the other, "ams don't grow!"

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EDUCATIONAL

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QUENTEN MACLEAN



Skilled in the interpretation of popular and concert music, on the organ, Quentin Maclean, after serving in the first Great War, became one of London's favorite organists. Three years ago he came to Canada on a visit, remained to perform for over a year. He is heard on "Organ Musings," each Tuesday at 9:30 p.m. EST.

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GRAY COACH LINES

The Week at OTTAWA

Specially Written for The Acton Free Press by ALAN HARVEY Canadian Press Staff Writer

Prime Minister Winston Churchill brought to Ottawa in the final days of 1941 a renewed spirit of determination and action.

Within a few hours of his arrival the British prime minister, confessed to what was regarded as a sequel to the Washington conferences in which Prime Minister Mackenzie King participated last week.

Canadians gave the British leader a rousing reception when he reached Ottawa. They were quick to demonstrate the support which they expected he would call for in his address to members of the House of Commons and Senate and to the Canadian people by radio.

Mr. Churchill's visit placed new emphasis on Canada's place in the master plan of strategy evolved at Washington which a British spokesman summed up this way: "World-wide strategy and world-wide victory."

Two other happenings pointed sharply the need for just such a world-embracing concept of warfare and perhaps for some unified form of allied command: the fall of Hong Kong after a fortnight of gallant resistance by Canadian, British and Indian troops and the surprise seizure of the tiny French possessions of St. Pierre-Miquelon, just south of Newfoundland, by Free French naval forces.

What role Canada will be assigned as a result of the conferences is not clear, but the presence this week in Washington of Prime Minister Mackenzie King, Navy Minister Macdonald, Defence Minister Ralston, Munitions Minister Howe, Air Minister Power and a staff of government officials seems to guarantee it will be a vital role. Mr. Churchill told a press conference at Washington that

Canada stands in line of danger on both coasts. "Whither Canada's Forces?" Disposition of available Canadian fighting forces is doubtless being considered; and this, in the face of parliament's opening in January and recent talk of national selective service, put fresh emphasis on the government's attitude towards the manpower problem. Another possibility was that the Dominion, already a chief source of supply for many of the commodities Britain needs, will be asked for further contributions to ease the strain on the British wartime economy.

Meanwhile Canada awaited with apprehension word of the individual fate of some 2,000 Canadian soldiers who had been helping to defend the Far East fortress of Hong Kong lost to overwhelming Japanese forces after bitter fighting. Defence Minister Ralston described it as making "a sombre but glorious page in the record of the Canadian army."

Casualties among the men of the Winnipeg Grenadiers and Quebec Royal Rifles who made up Canada's two battalions in Hong Kong were believed heavy but a list was not expected immediately. They fought under Brig. J. K. Lawson, feared killed, and his chief of staff, Col. Pat Hennessy, killed by shell fire. The Japanese said many Canadians were taken prisoner.

Those Islands Still another problem before the Washington conference. This time one relating only to Canada, the United States and France was the question raised by the unheralded action of Admiral Emile Muselier, commander-in-chief of Free French naval forces, in taking control of St. Pierre-Miquelon. "Diplomatic quarters in Washington indicated at the week-end that the question probably will be resolved with neither Canada nor the United States likely to do anything to return the islands to Vichy control following a plebiscite conducted in the islands which resulted in almost overwhelming support of the Free French action."