

Knighting & Death of Sir Alex Bertram 3.

Personal. shell file

*1916 **

Memorandum

Personal.

January 3-16

Brigadier General Sir Alexander Bertram.
4217 Western Ave.
Westmount, Quebec.

Dear Sir Alexander,-

I want to be among the first to congratulate you. I am delighted to see your name in The Gazette, as one of those honored at the opening of the New Year.

I happened to suggest the idea of a Shell Committee and it was my good fortune to nominate you as Chairman. In looking at the tremendous work now being done on shells in Canada, people forget that dreary September day, when we spent four hours waiting to see the Minister of Militia about what many people thought was "a fool's errand". And people also forget that Canadian firms actually commenced production many months ahead of similar sized American and British firms.

The invitation to the manufacturers came, as it were, out of a blue sky. The proposition, when we saw it, was one that might well have been shirked. In fact, the whole thing could have come to very little indeed, if, underlying all other motives, there had not been a real desire to do what we consistently could to help the cause. But "our bit" would have been very small, if it had not been for your organization.

Firms went in because they had faith in your word and spent money to enlarge because they had confidence that

Brigadier General, Sir Alexander Bertram.
Westmount, Quebec.

you would continue to give them a square deal. The idea of getting component parts from widely separated points had never been tried and was the wonder of visiting British experts. It was a tremendous task and has been successfully handled.

The manufacturing industries have made a big step forward in the strength and self-confidence this work has given them. A year ago not one of them would have tackled the present contracts for large shells: and for this building up we have you in very large measure to thank.

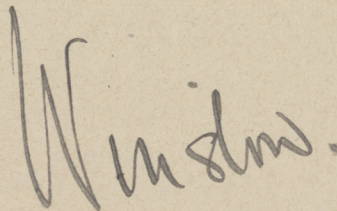
We have your very appropriate New Year's card and are glad to feel that Canadian Munitions are "equal to the highest standard of the Imperial Service". If we live up to that standard our work will not stop with the war.

With best wishes for a happy and prosperous New Year.

Yours very truly,

CANADIAN INGERSOLL RAND CO., Limited.

ESW/K



Manager Munitions Department.

INGERSOLL-RAND CO.

EXECUTIVE OFFICE

11 BROADWAY

NEW YORK January 4, 1916.

Personal

*Close contact with
Ing. Rand*

E. S. Winslow, Esq.,
Manager, Munitions Department,
Canadian Ingersoll-Rand Company, Ltd.,
Sherbrooke, Canada.

Dear Mr. Winslow:-

I am in receipt of your letter of December 31st, enclosing copy of your order for machining the 200,000 eight-inch shells, all of which looks quite all right, though I have not yet received from Mr. Gilman a copy of the formal contract. I hesitate to write him on this subject because I do not like to bother him. If you can see your way clear to sending me a copy of the document, I will be very much obliged.

Mr. G.

I am wondering if you were ever approached by the Munitions Board on the subject mentioned in your letter to me of December 22nd. Please bear in mind that I am very much opposed to entertaining any suggestion on the part of the Board involving changes in the prices of any of the contracts you are now working under.

Yours very truly,

George Duesenberg

*W
Jan 6*

CANADIAN JINGERSOLL-RAND CO., LIMITED

FILE NO.

Personal

SHERBROOKE, QUE. Feb. 4th, 1916.

*more of doubtful
character*

TO

Mr. Winslow.

SUBJECT: EMPLOYEES.

DEAR SIRS

It is of the utmost importance that every man in charge of help in this Works exercise the greatest care in investigating the nationality and history of each person in his employ.

Do not be backward about investigating the antecedents and history of any person in your employ. This is not a complicated matter. There may be only a very few in your department who are strangers to you or to some foreman in the shop who has been with us for years, and it does not mean that you need make any inquiry about men for whom you can already vouch.

Will Wilson will inquire thoroughly about men whom he engages, and I want you to take up with him the history of any person in your department, and if this is not entirely satisfactory to you, make further inquiries and in case of real suspicion act quickly. We enjoy a location which we feel is free from suspicious characters. Do not let this become a source of danger.

Investigate bags, boxes or bundles brought into the Works, as well as those going out.

Yours truly,

A. Saugster

Superintendent. /AH

AS/H

Re Adapter

1916 -

Contract Form A

CONTRACT FOR MUNITIONS.

See Order No. 3026

Contract made this thirty-first day of January A.D. 1916.

BETWEEN Canadian Ingersoll-Rand Company, Limited,
Sherbrooke, Quebec.

(herein referred to as the CONTRACTORS)
of the First Part,

AND

HIS MAJESTY THE KING represented herein by the Imperial
Munitions Board appointed to act in connection with
procuring certain munitions of war and acting herein by
its Chairman or Deputy Chairman and Secretary or acting
Secretary,
of the Second Part.

WITNESSETH

1. The said Munitions Board is hereinafter referred to as
"The Board" and all references to it shall for all purposes
hereof be deemed to be references to His Majesty represented by it.

2. The term "work" in this contract means the munitions or
parts and other things to be delivered for the prices or purchase
money payable therefor and includes all works and materials connected
therewith which are to be done and supplied by the Contractors.

3. The specifications and conditions attached hereto and the
drawings referred to herein are hereby made part of this contract.
The Contractors agree to make and do the work called for by said
specifications and conditions and to make deliveries in accordance
therewith and generally to comply in all respects with the terms of
said specifications and conditions. The prices to be paid to the
Contractors for the work under this contract and the times and manner
of payment shall be as set out in the order hereto annexed, and such
prices will be paid by the Board to the Contractors in accordance
therewith.

4. Time is of the essence of this contract and if in the opinion
of the Board the Contractors should make default in substantially
carrying out this contract or if in the opinion of the Board preparation
for doing the work hereunder or the doing of such work should be
unreasonably delayed so that deliveries will not likely be made in
accordance with the terms hereof the Board may, by notice to the
Contractors, call upon them to put an end to such default within a
time or times to be named by the Board or the Board may by notice to
the Contractors call upon them to provide within a time or times to
be named by the Board the means to obviate such delay and to obviate
the same, and if in the opinion of the Board the default be not
substantially put an end to within the time named in the behalf or
means to obviate the delay be not substantially provided and the delay
substantially obviated within the time named in that behalf then and

in either case the Board may at any time by notice to the Contractors terminate this contract. Should contract be cancelled under this clause then no claim for capital expenditure will be allowed and clause nine shall not apply.

5. The Board may from time to time during the currency of this contract have inspection made by a person or persons appointed by it of the premises and plant where work is being done or intended to be done under the contract, and of the work in progress or completed so that the preparations for any progress and condition of the work may be ascertained. The Contractors shall afford all facilities for such inspections and give all information required therefor.

6. The Contractors shall keep proper accounts of the capital cash expenditure made by them for the purpose of this contract exclusively in and upon plant and machinery and premises and of the actual cash cost of materials procured for the purposes of this contract exclusively and the invoices, receipts and vouchers relating thereto, and such accounts of expenditure and cost of materials, invoices, receipts and vouchers shall be open to audit and inspection from time to time by a person or persons appointed by the Board and the Contractors shall afford all facilities for such audits and inspections and give all information required therefor.

7. Whereas this contract is entered into for the military (not naval) purposes of the war now in progress by Great Britain and Allies against Germany and Allies and it is expedient that provisions for its termination on fair and equitable terms should be made if on account of cessation or termination of such war or in anticipation thereof the Board should be of opinion that it has become unnecessary that all the work hereunder should be completed. Therefore it is agreed that at any time and from time to time during the currency of this contract the Board may notify the Contractors that such part or parts of the work then remaining to be done as the Board may designate is or are not to be done or further proceeded with, and the Contractors shall thereupon cease doing or proceeding with the part or parts so designated, but shall complete this contract with respect to the remaining part or parts of the work hereunder - unless notified to the contrary by another notice given under this clause. The reasons for giving notice need not be stated, reliance being placed upon the good faith of the Board that notice will be given only in accordance with the spirit of this clause.

8. Should the Board give notice under the last preceding clause, the Contractors may without delay send to the Board a statement showing in detail with all necessary dates and items the amount of capital cash expenditure made by the Contractors for the purposes of this contract exclusively in and upon plant and machinery and premises and a statement showing in detail with all necessary dates and items the materials on hand (or contracted for and of which the Contractors must take delivery) procured for the purposes of this contract exclusively and the actual cash cost thereof, such statement may be accompanied by such information and explanations as the Contractors may think necessary and shall be verified by Statutory Declaration made by a person or persons having knowledge of the facts declared to, that such statements are to the best of his knowledge and belief true and correct. Unless such statements accompanied as aforesaid be sent to the Board within thirty days after notice under the last preceding clause has been given, or within such farther time as the

Board may allow, they shall not be received or acted on and no claim by the Contractors for reimbursement of expenditure shall be considered or allowed.

9. Upon receipt of such statements by the Board, the following terms and conditions shall be carried out:-

(a) If the work delivered at the time-such notice is given and that remaining to be delivered after deducting the part or parts not to be done or proceeded with according to such notice does not exceed 20% of the total deliveries contracted for, then the Contractors shall be reimbursed by the Board for the whole of their said capital expenditure on plant, machinery and premises as provided for in clause ten.

(b) If the work delivered and remaining to be delivered as aforesaid, exceeds 20% of the total deliveries to be made under the contract then the Contractors shall be reimbursed by the board, a proportion of the said capital expenditure to be ascertained upon the following principal, that is to say, that for every 1% of the deliveries made over and above the 20% above referred to, it shall be deemed that 1 $\frac{1}{3}$ % of capital expenditure has been reimbursed to the Contractors and no claim for reimbursement of capital expenditure to such percentage will be allowed, thus, when 50% of the deliveries shall have been made on the contract 37 $\frac{1}{3}$ % of capital expenditure shall be deemed to have been reimbursed, and when 80% of the deliveries shall have been made on the contract 75% of the capital expenditure shall be deemed to have been reimbursed and so on.

(c) In addition to the percentage (if any) of the said capital expenditure to be reimbursed to the Contractors there shall be reimbursed to them by the Board the actual cash cost of the material on hand (and contracted for and of which the Contractors are obliged to take delivery) procured for the purposes of this contract exclusively and not required for the work remaining to be done after the giving of such notice, and such materials so reimbursed for shall be handed over to the Board or its order, but the materials thus taken over will in no case be in excess of that required for carrying out this contract in full as if no notice had been given under clause seven hereof.

PROVIDED that no reimbursement shall be made for materials whether raw or in course of manufacture or manufactured, which have been or may be rejected after inspection as not complying with the terms and conditions of the specifications annexed.

10. With respect to the plant, machinery and premises in and upon which said capital expenditure has been made and in respect of which the Board is to reimburse the whole amount the following provisions shall apply. If such plant, machinery and premises consist of what has been procured by the Contractors from others for the purposes of this contract exclusively then the same shall be delivered or conveyed to the Board or its nominee upon such reimbursement therefor being made unless the Contractors and the Board agree that the Contractors shall retain the same at a value to be agreed on, but if such capital expenditure has been made upon plant, machinery or premises not procured for the purposes of this contract exclusively then the Contractors shall retain the same and the value to the Contractors of the said capital expenditure made thereon shall be agreed on or settled in the manner hereinafter mentioned and shall be deducted from the amount to be reimbursed.

If only partial reimbursement of capital expenditure is to be made by the Board, then the Contractors shall retain the plant, machinery

and premises in respect of which such partial reimbursement is to be made, and the value to the Contractors of that proportion of said plant, machinery and premises on which partial reimbursement is to be made shall be agreed on or settled in the manner hereinafter mentioned and shall be deducted from the amount to be reimbursed.

11. Should the Contractors have leased real or personal property for the purposes of this contract exclusively and should there be an unexpired part of the term of the lease when notice is given under clause seven hereof which has not expired when the work remaining to be done in accordance with such notice has been completed, then if the Contractors vacate the leased premises and make no further use thereof the Board shall indemnify the Contractors against payment of the pro rata of rent or other payment and taxes (if any) under the lease until the termination thereof or until the end of the time allowed under this contract for its full completion which ever shall be the shortest period. PROVIDED always that the Contractors shall terminate the lease (if any) as soon as it is lawful for them to do so.

12. Should the Board and the Contractors differ as to the amount of cash capital expenditure or as to whether the items or amounts included in the Contractors statement properly form part of capital expenditure or as to the actual cash cost of materials or as to whether expenditure included in the statement has been made or materials procured for the purposes of this contract exclusively or as to any percentage or proportion referred to in clause nine hereof or as to the value to the Contractors of capital expenditure made upon what is to be retained by the Contractors under clause ten hereof or as to any matter connected with the carrying out of the terms of this contract consequent upon the giving of notice under clause seven hereof such difference shall be decided in a summary way by a commission consisting of one or more disinterested persons to be appointed by Order-in-Council of His Majesty's Imperial Government, and such powers of summoning witnesses, compelling production of documents, taking evidence under oath and for dealing generally with the decision of the questions involved may be conferred upon the commission as said Government may think proper. The decision of said Commission shall be final.

13. Any notice which the Board may desire to give to the Contractors may be given by letter deposited in any Post Office in Canada directed to the Contractors to the following address, viz:-

Canadian Ingersoll-Rand Co., Ltd.
Sherbrooke, Que.

and such notice shall be deemed to have been received by the Contractors when in ordinary course of post the same would be delivered, or such notice may be served upon the Contractors by being left with the Contractor or some person in the Contractors' employ at the Contractors' office or place of business in Sherbrooke, Que.

14. No assignment or sub-letting of this contract or any part thereof shall be made without the written consent of the Board and in case of attempted assignment or sub-letting or breach of this clause the Board may cancel this contract.
In witness whereof these presents have been executed by the parties hereto the day and year first above written.

WITNESS.

CANADIAN INGERSOLL RAND COMPANY, LIMITED.

WITNESS.

per.
IMPERIAL MUNITIONS BOARD.

C. R. HINES. Sgd.

per J. W. FLAVELLE, Sgd.
Chairman.

March 20th, 1916

run up our capacity away above our competitors, so that, they would, at least, be content not to put in any new equipment and, as far as I can make out from the Circulars of the Shell Manufacturers Association, the majority have nearly reached this condition. If they will drop out and leave the price \$1.50 we would do very well on a production of 4,000 or 5,000 per day, whereas, if they stay in for a few months more their competition will probably run the price down still further.

I think our best policy would be to accept the straight order for 200,000 shells (if we can still get it) at \$1.50.

Yours truly,

Shapnel?

A. W. Winslow

ESW/DJK

Manager Munitions Department.

COPY

IMPERIAL MUNITIONS BOARD.

OTTAWA.

Feb 11th, 1916.

CIRCULAR NO. M-9

Issued to all Machining and Assembling
Manufacturers of High Explosive and
Shrapnel Shells.

Dear Sirs,--

Please note that upon completion of existing contracts for the machining and assembling of all classes of shells, the Board desires that the Manufacturers will themselves furnish the necessary Paint, Pettman's Cement, Varnish, Luting, Solder, Petroelum, Grease, and Buckshot entering into the manufacture of such shells.

Kindly therefore bear this in mind when quoting in future for machining and assembling.

Kindly acknowledge receipt.

Yours very truly,

IMPERIAL MUNITIONS BOARD.

CANADIAN INGERSOLL-RAND COMPANY, LIMITED

SHERBROOKE, QUE.

Shrapnel Misc.

March 24th, 1916.

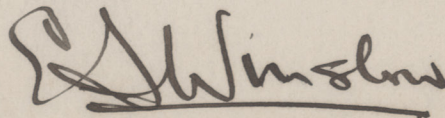
COPY TO
General Manager.

The following are the present allotments for 18 Pdr. Shrapnel of all manufacturers above 5,000 or 6,000 per week.

Canadian Ingersoll Rand Company	20,000	←
Canadian Fairbanks-Morse Company.	20,000	
Canadian Bridge Company	18,000	
C. P. R.	18,000	
Dominion Bridge.	12,000	
Massey-Harris.	10,500	
Canadian Westinghouse.	10,000	
National Steel Car.	10,000	
Lymburner.	10,000	
Montreal Locomotive.	10,000	
Steel Company of Canada.	7,000 (B) 2,200 (M)	

The only High Explosive manufacturer, who approaches the 20,000 mark, is the Dominion Bridge Company with 24,000 per week capacity, but whose orders, we understand, are either at an end or drawing to an end. Over half of the high explosive production comes from the West and the production of the larger shops is between 5,000 and 10,000 per week.

YOURS TRULY,



Manager Munitions Department.

Order No.4099

IMPERIAL MUNITIONS BOARD.

Contract No.49

BCS

OTTAWA, March 28th, 1916.

To Canadian Ingersoll-Rand Co., Ltd.,

Sherbrooke, Que.

WAR OFFICE - 94/S/2771

Please furnish the following materials subject to the conditions on back hereof, and to be shipped in accordance with written shipping instructions.

Form C.

J.W.H.

Quantity.	Description	Price and Terms.
180,000	---Machining and Assembling 180,000 - 18 Pr. Mark IX Shrapnel Shells. This work to be in accordance with Drawing #C-23, Issue No.7 and Specification <u>L</u> . <u>3536 N</u>	\$1.50 each F.O.B. Vaudreuil, Quebec, Nobel, Ontario, Renfrew, Ontario, Montreal, Que, St.John N.B. or Halifax, N.S.

Delivery to commence June 15th, 1916, at the rate of 18,000 per
 Confirming week and to continue at this rate until the order is completed.
 our letter
 of Mar 16th, The Board has option at any time to cancel all Shells not delivered
 and your as agreed.
 acknow-

ledgement The necessary Shipping Boxes, Forgings and all other Component Parts
 of Mar 18th, entering into the manufacture of these shells, except those specified
 1916. in our Circular No.M-9, February 11, 1916, to be supplied by the
 Board free of Charge.

You will be held responsible for the safety against fire, theft or
 other causes of all Shipping Boxes and Component Parts furnished you,
 and in the case of Fire Insurance, you are to insure in the name of
 the Board and to the satisfaction of the Insurance Department of the
 Board.

It is understood that the turnings from the Copper Bands will be the
 property of the Board.

Sgd Edward Fitzgerald. - Purchasing Agent.

Sgd J.W.Flavelle - Chairman.

CONDITIONS.

Shippers will please see that Order and Contract Numbers are distinctly shown on each invoice. Any invoice sent without these numbers will be returned.

Invoices in duplicate must be mailed to Imperial Munitions Board, Ottawa, immediately each shipment is made.

When goods are purchased outside of Canada, two extra copies of invoices, duly certified for Customs purposes, are required to be mailed day shipment forwarded.

No charges for packages, packing or cartage will be allowed.

Payment will be made each month for goods received at destination during the previous month. Drafts will not be accepted unless provided for herein.

No goods will be paid for unless a signed official order has been issued for same and goods inspected and accepted by authorized Inspector.

No goods in excess of quantities specified hereon will be accepted.

Contract Form C attached hereto, also governs this order.

A written acknowledgement of this order is required.

Hull, P. Q.
Montreal, P. Q.
Toronto, Ont.
Windsor, Ont.
Ottawa, Ont.
Kingston, Ont.
Quebec, P. Q.
Price and Terms.

2nd Edward H. ... - Chairman.

Order No. 4000

COPY

Contract Form C.

CONTRACT FOR MUNITIONS.

See Order No.4099

Contract made this Twenty-eight day of March A.D. 1916.

BETWEEN

Canadian Ingersoll-Rand Company Limited,

Sherbrooke, Que.

(herein referred to as the CONTRACTORS)

of the First Part,

AND

HIS MAJESTY THE KING, etc.

(Standard form of Contract Form "C" includes the following special clauses inserted with typewriter.)

2. The Contractors agree to sell to the Board and the Board agrees to purchase from the Contractors subject to the terms and conditions hereof the following:-

Machining and Assembling one hundred and eighty thousand (180,000) 18 Pounder Mark 1X Shrapnel Shells. This work to be done in accordance with Drawing #C-23, Issue No.7 and Specification L

3536 N

The necessary Shipping Boxes, Forgings and all other Component Parts entering into the manufacture of these Shells, except those specified in the Board's Circular No.M-9, February 11, 1916, to be supplied by the Board free of charge.

The Contractors will be held responsible for the safety against fire, theft or other causes, of all shipping Boxes and Component Parts furnished them, and in the case of fire insurance they are to insure in the name of the Board and to the satisfaction of the Insurance Department of The Board.

It is understood that the turnings from the Copper Bands will be the property of The Board.

To be delivered as follows:-

To commence June 15th, 1916, at the rate of eighteen thousand (18,000) per week and to continue at this rate until the order is completed. The Board has option at any time to cancel all Shells not delivered as agreed.

3. The price to be paid by the Board for the materials and things

hereby purchased and the times and manner of payment shall be as follows:-

One dollar and fifty cents (\$1.50) each F.O.B. Vaudreuil, Quebec, Renfrew, Ontario, Montreal, Quebec, St. John, N.B. or Halifax, N.S.

Payment will be made each month for goods received at destination during the previous month. Drafts will not be accepted unless provided for herein.

WITNESS.

CANADIAN INGERSOLL RAND COMPANY, Limited.

P.H.Skelton.

E.S.Winslow.

Manager Munitions Department.

Witness.

IMPERIAL MUNITIONS BOARD.

H.H.Hines.

J.W.Flavelle.

Chairman.

COPY

IMPERIAL MUNITIONS BOARD.

OTTAWA.

March 31st, 1916.

Canadian Ingersoll-Rand Co., Ltd.

Sherbrooke,

Que.

Dear Sirs,-

Enclosed please find our Order
No.4099 and Contract Form C in duplicate.

Kindly execute and return one
copy to this office and have contract show the
title of the official executing same.

Yours very truly,

IMPERIAL MUNITIONS BOARD.

Sgd. J.W.HAUGHTON.

For Purchasing Agent.

*Mr. Winslow
Personal*

S-45805

April 6-16

W. H. Dunslow

Freight Ppd.
Imperial Munitions Board,
Ottawa, Ont.

M-47385
GSO-403
4099 contract #49



Machining and assembling - 18 Pdr. Mark IX Shrapnel
Shells. This work to be done in accordance with drawing
FC-23, Issue #7, and specifications L
3536 N

Delivery to commence June 15th, 1916, at the rate of 18,000
per week and to continue this rate until the order is
completed.

The Board has option at any time to cancel all shells not
delivered as agreed.

The necessary shipping boxes, Forgings and all other com-
ponent parts entering into the manufacture of these shells
except those specified in our circular #M-9, February
11th, 1916, to be supplied by the Board free of charge.

You will be held responsible for the safety against fire,
theft or other causes of all Shipping Boxes and component
Parts furnished you, and in the case of fire insurance,
you are to insure in the name of the Board and to the
satisfaction of the Insurance Department of the Board.

It is understood that the turnings from the Copper Bands
will be the property of the Board.

Confirming Shell Committee's letter of March 16th, and our
acknowledgement of March 18th, 1916.

each F.O.B. Vaudreuil, Quebec, Nobel, Ontario,
Renfrew, Ontario, Montreal, Quebec, St. John, N.B. or
Halifax, N.S.

CANADIAN INGERSOLL-RAND CO., LIMITED

FILE NO. Personal.

SHERBROOKE, QUE. April 7th, 1916.

TO Memorandum.

SUBJECT: 8" Inspection.

DEAR SIRs

The following Inspection was performed this morning.

<u>Inspection of</u>	<u>Guages Used.</u>
Bore. - - -	- Plug Guage H & L
Finish Turn Body -	- Ring Guages H & L
Finish Turn Base.	- Ring Guages H & L
Driving Band Recess.	- Width H & L Distance from Base H & L Undercut.
Fuse Hole - - -	- Plug Guage H Thread Guage L
Profile - - -	- Profile Guage
Diam of D.B.Groove	- Horeshoe H & L
Overall length -	- Length guage H & L
Thickness of wall.	- Indicating caliper guage.

Inspection

Yours truly,

*Wmslow**to go with drawing of 8" steel*

Imperial Munitions Board

O t t a w a

June 6th, 1916.

ALL MACHINERS AND ASSEMBLERS:

News Daily

Gentlemen:-

Will you kindly make known to your staff generally that the constant flow of munitions is a necessity to the carrying ^{on} of the war. The Imperial Authorities responsible for the success of Military operations require faithful performance in this respect by "The Man Behind the Man Behind the Gun."

We feel sure that no one will begrudge working overtime where necessary and to eliminate holidays while the war is on. Each night gang should put in six nights a week and each day gang the full 60 hours per week.

We do not encourage Sunday work, except to overhaul the machines for necessary repairs, or to make up those operations where the work is behind schedule.

May we count on the co-operation of your firm in all respects to insure a constant supply of a volume of output equal to the whole capacity of your plant?

Yours truly,

IMPERIAL MUNITIONS BOARD.

ALLAN G. McAVITY

SUP'T OF PRODUCTION

1916 June

CANADIAN INGERSOLL-RAND CO., LIMITED

FILE NO.

SHERBROOKE, QUE. June 8th, 1916.

TO Works Manager. Sherbrooke

SUBJECT:

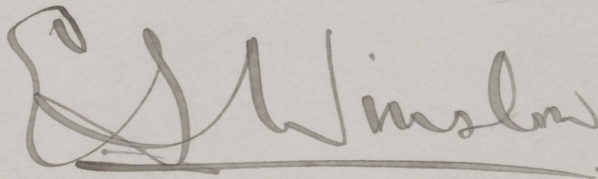
DEAR SIRS

(man)

We are being urged in every possible way by the Imperial Munitions Board not to let up in our endeavours to turn out the greatest possible number of shells. Not only is our shrapnel needed but there is the greatest need at the front for our 8" shells. The Board understand that the very large number of men which we have found it necessary to take on makes every trained man a valuable asset, and a campaign is being commenced to release men from other employments for recruiting and munitions work

The last circular which we have is dated June 6th, and we attach a copy which I think should be posted where it can be read by all our men. I hope that the importance of this appeal will be thoroughly appreciated, as such an appeal is not sent out without a very good reason.

Yours truly,



ESW/GEH

Manager Munitions Department.

man
good

GRAND HOTEL DU LOUVRE
ET TERMINUS

BOULOGNE-SUR-MER

E. DELIGNY, PROP.

TÉLÉPHONE 1-43.

en route

13th June 1916.

Dear Edward,

14 shells 18"

Many thanks for your good wishes, Naomi forwarded your letter & I got it before starting back. With any sort of luck I ought to be your brother-in-law inside of 48 hours, and only wish you & Lois & Hugh & Ken could be there.

I can clearly see that running the factory is no cinch these days; but keep the wheels going round, we can put the shells where they will do most good if you can deliver them — & I think you have the harder proposition so far. It would do your heart good to see some of that 8" stuff going up — it makes the Hun wire and trenches look like a disreputable sand-pit.

No doubt you get private news from Naomi through Lois, and war news from the papers so I'll close.

Yours,

Walter Duguid.

IN HIS ADDRESS before the Canadian Club on Wednesday, Lt.-Col. Mulloy (who spoke on National Registration) told the following significant story. He recently asked the manager of a certain industrial company in Ontario if he could address the company's employees. The manager consented, with this restriction: "I have 9 skilled men and 27 unskilled men; you can take all of the latter, but for goodness sake, leave me the 9 skilled men."

After the Colonel's address, 7 of the skilled men came forward and only 2 of the unskilled men!

The same thing happened on the Hollinger Gold Mines. Mr. Robbins, the general manager, declared to Col. Mulloy, with a gesture of despair "You recruiting officers have taken all of my technical staff, and none of my unskilled labor.!

And the Government talks of Production and Thrift, when this tremendous wastage is sapping our energies.!

FORCE ELIGIBLES TO SERVE OR QUIT

Munitions Manufacturers Con- sider Plan to Urge Em- ployees to Enlist

REPLACE FIT BY UNFIT

Committee Will Consider Pro- posal to Replace Those Who Could Serve by Returned or Rejected Men

Preliminary steps were taken by the Board of Trade Committee on Recruiting yesterday with regard to a movement which is expected to go far in the direction of filling the places of men fit to serve at the front by returned soldiers and men who have offered their services but have been found physically unfit. This move at present has only gone as far as the munition factories, but it is expected to spread amongst other employers of labor, to a certain extent. It is hoped by those behind it that its ultimate result will be that the men physically fit, and not otherwise prevented from serving at the front, will be forced out of their jobs, and their places taken by men who have done service or tried to go to the front. The idea is not Government conscription, but a somewhat severe form of compulsion on the part of employers, in order to ensure that men who should be at the front are at least not taking the work that might be done by men who have been in the trenches, or who have shown their desire to serve.

"Discriminate recruiting among munition factories," is the plan so far discussed. A meeting was yesterday called by Mr. J. H. Sherrard, chairman of the Board of Trade Committee on Recruiting, for the munitions makers of Montreal to discuss this question and also the following letter from Capt. Campbell Stuart, Chief Recruiting Officer, for the Irish-Canadian Rangers:

"I have the honor to lay before you certain suggestions in regard to facilitating recruiting among the munition manufacturers, which I would be grateful to have you take up with them for their consideration.

"We are constantly confronted with

SHERBROOKE RECRUITING ASSOCIATION

(ENGLISH SPEAKING SECTION)

CHAIRMAN

JAMES MACKINNON,

EX-MAYOR OF SHERBROOKE

N. B. PRICHARD,

HON. SEC'Y.

H. IRWIN,

HON. TREAS.

OFFICE: SUN LIFE BUILDING

SHERBROOKE, P. Q. July, 5th. 1916.

E. S. Winslow, Esq.

Can. Ingersoll Rand Co.

Sherbrooke, P. Q.

Dear Sir:-

M Recruiting

Munition Workers.

I am in receipt of your favor of the 22nd. enclosing correspondence on the above matter. I appreciate the difficulties touched on by you, and agree with you that certain men are of more value to the country working in your plants than they would be on the firing line. You will see I say "Certain men". I refer exclusively to qualified mechanics and to others whose executive, administrative, or effective capacities are vital to the success of a concern. I do not refer to a large number of men, farmer's sons and others, who are swarming into the cities attracted by the high wages and who are quieting their consciences with the specious argument, that they are more useful at the lathe than either on the farm or in the firing line. Many of such men are, in the last analysis, shirking their duty and for such men to pose as sacrificing as much for their country, and doing as much for its welfare as the boys in the trenches, is a travesty of truth which would make the gods laugh.

I would particularly call your attention to an article which appeared in the Gazette on July, 5th. headed "Force eligibles to serve or quit". This expresses in a general way the views I have held for sometime, and I believe you and your Company will agree with me, that where possible we should do all

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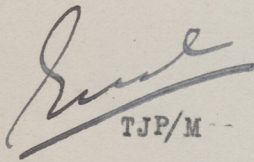
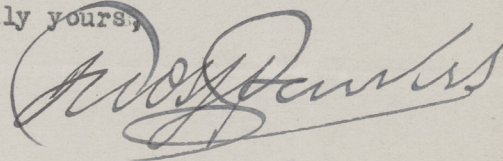
SHERBROOKE, P. Q.

-2-

we can to replace men eligible for the front in all factories by others not so fortunately situated. Will you accept my appreciation not only of your courtesy in sending me this letter but also for the efforts your Company have made to assist Recruiting and the Patriotic Fund.

With kind regards,

Faithfully yours,



TJP/M

days will be spent on the train - it will be quite a change at least.

I wish you would give my parting regards to the various members of the Sherbrooke plant whom I know well. I will probably be writing from England later, in order at least to have my address left with the firm.

Will say good-bye for now and will hope sometime in the future to see you all again in Sherbrooke

Yours very sincerely
Arthur W. Youell.

Petawawa Camp,
October 21st/16.

Mr. E. D. Winslow
Canadian Ingersoll-Rand Co.
Sherbrooke, Que.

Dear Mr. Winslow -

Your letter of September 22nd should have been acknowledged long before but the rush and newness of this life has rather eliminated writing.

I appreciated very much your readiness to drop the matter of our little difficulties and even now after being

initiated into the actual army life. I am still content with my move.

We leave to-day for overseas which is all in accordance with my expectations as my intention in joining was to get a speedy trip across. Our route across is of course kept quiet but I hope in the course of a fortnight at least to be on English soil.

This life has agreed with me splendidly. There is plenty of strenuous work, some interesting, some exciting, some tedious and some rather far removed from cleanliness. It's all done with such cheerfulness that no one cares. Appetites develop sufficiently to make the plain substantial food quite appreciated. It has been cold at nights for tent life but a person gets in the habit of dressing at night rather than undressing, in this life.

It's very difficult writing here so you will have to excuse paper, scribbling and all other details. It's pouring rain and with five lads in the tent with all our belongings packed up ready to leave, there is little room or opportunity to do anything. I expect the next few

Winslow Personal
Shop work hampered
by lack of intelligent men
E.W.S.



1916

Elgin House, Lake Joseph,
Muskoka, Ont., Sept 19/16.

E. S. Winslow Esq.,
Canadian Ingersoll-Rand Co.
Sherbrooke, Que.

Dear Mr. Winslow -

I have received your letter of the thirteenth instant and have read it over very carefully. Though my viewpoint may seem rather unreasonable to you, I can only say that I am proceeding with my plans regarding enlisting and am sincerely hoping everything turns out O.K.

I may be rather self-conscious about the matter but after working against the grain for two years, I am following out my desires of getting into the ranks and feel that it will bring at once the contentment which I have not felt during that period.

I had hoped that the month's notice which I gave would be sufficient to obtain additional or rearranged help, to enable work to proceed as usual. I still hope things will adjust themselves until the day we all come back.

Yours very sincerely
Arthur W. Youell.

Personal.

Sept. 22nd/16

Mr. Arthur W. Youell,
Elgin House, Lake Joseph,
Muskoka, Ont.


My dear Youell:-

I am very glad to have your letter of September 19th,
and assure you that we miss your assistance here. We will at any
moment, be glad to see you back, but nevertheless, I will not
bother you any more, at least for the present. Hoping your holiday
is doing you good, I am

Yours very truly,

ESW/BP.

CANADIAN INGERSOLL-RAND COMPANY, LIMITED.


Manager Munitions Department.

8-INCH SHIPMENTS ACCORDING TO MR. WINSLOW'S FIGURE NOV. 15-16

DATE	ESTIMATED SHIPMENTS	ACTUAL SHIPMENTS	TOTAL ESTIMATED SHIPMENTS	TOTAL ACTUAL SHIPMENTS	DIFFERENCE
NOV - 17-16	SHIPPED TO DATE } 37,380	SHIPPED TO DATE } 37,380	SHIPPED TO DATE } 37,380	SHIPPED TO DATE } 37,380	✓
" 24-16	4000	2,750	41,380	40,130	1,250
DEC. 1-16	4250	3,238	45,630	43,368	2,262
" 8-16	4500	4,000	50,130	47,368	2,762
" 15-16	4750	5,125	54,880	52,493.	2,387
" 22-16	5000	1,000	59,880	53,493.	6,387
" 29-16	5250	4,124	65,130	57,617	7,513
JAN 5-17	5500	5,376	70,630	62,993	7,637
" 12-17	5750	3750	76,380	66,743	9,637
" 19-17	6000	6370	82,380	73,113	9,267
" 26-17	6250	2126	88,630	75,239	13,391
FEB 2-17	6500	4,874	95,130	80,113	15,017
" 9-17	6750	11,750	101,880	91,863	10,017
" 16-17	7000	5,000	108,880	96,863	12,017
" 23-17	7250	6,000	116,130	102,863	13,267
MAR 2-17	7500	6,500	123,630	109,363	14,267
" 9-17	7750	4,500	131,380	113,863	17,517
" 16-17	8000		139,380		
" 23-17	8250		147,630		
" 30-17	8500		156,130		
APR 6-17	8750		164,880		
" 13-17	9000		173,880		
" 20-17	9000		182,880		
" 27-17	9000		191,880		
MAY 4-17	9000		200,880		
	<u>Total</u> 200,880				

7
Windsor Personal

C O P Y

IMPERIAL MUNITIONS BOARD

OTTAWA

November 25th, 1916

Canadian Ingersoll Rand Company,
Sherbrooke, P.Q.

Dear Sirs, -

Referring to conversation with Mr. Winslow in Ottawa today, we beg to confirm our verbal understanding with Mr. Winslow that you will proceed forthwith to increase your Shrapnel producing capacity so as to give a weekly production of 35,000 Shrapnel shells, this being 10,000 per week over your present capacity of 25,000 per week.

The increase from 25,000 to 35,000 per week is to commence as quickly as possible, and to be in full effect by February 15th, 1917.

The Board undertakes to give you a renewal order for such quantity of Shrapnel shells as you can produce on the above basis by June 30th, 1917, it being understood that contract form "A" will be issued to cover the quantity of shells which will be turned out from the new capacity at the rate of 10,000 per week. Price: \$1.50 each f.o.b. destination in Canada.

Yours truly,

(Sgd) Edward Fitzgerald
Assistant to the Chairman.

EFG/AMG

him willingly and enthusiastically. Within an incredibly short space of time he had organized the shell-making business throughout Canada upon a scale never even contemplated in the original plans.

Moreover, his energies did not end there. The Americans were just coming into the game, but knew nothing about such things as the adaptation of factory machinery to shell-making purposes. So they came to Canada and they saw Alexander Bertram and learned about shell-making from him, and went back home and made their myriad millions. There can be no doubt of the incalculable value of the services Sir Alexander rendered the Allies by his energy, his skill, and his mastery of detail. By his personal friends he will long be remembered as a man of lovable nature, keenly interested in all manly sports, a great supporter of the Dominion Rifle Association, and a staunch and sympathetic friend of youth. No man believed more thoroughly than he did in Canadian youth, and many a young man owes his start in life and his present-day success to Sir Alexander's ready aid and kindly advice. Such men as he make the name of Canada respected abroad and at home set a noble example of the highest ideals of citizenship.

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A MONTH OF MINOR ATTACKS.

BRITISH GAINS IN RAIN AND MUD.

SPLENDID SPIRIT OF ALL ARMS.

(From Our Special Correspondent.)

BRITISH HEADQUARTERS, Nov. 7.

For a whole month now rain and the condition of the ground have prohibited operations of any magnitude. Records of the last 100 years are said to show that in the Somme Valley October is the wettest month of the year, and one can believe it, for in the whole month there have been only 11 days on which some rain did not fall. Unfortunately the October weather has now continued over the first week of November, and the outlook to-day is even less promising than it has been at any time since the wet weather began.

The annoying thing is that it does not rain continuously or for very long spells. Almost every day has been partly fine, and for a week in succession the daylight hours have been bright and a stiff wind has seemed to be industriously drying the ground. Then in the early morning one has waked again to the steady down-pour from clouds which have drifted up during the night. The hopes which had grown through 20 hours of fine weather have again and again been dashed by four hours of rain. After each relapse the ground has been a trifle more water-soaked than before. Now, after two days of gale which were full of promise, we have had, perhaps, the wettest 12 hours of the whole four weeks.

While grand operations have been impossible, however, there has been continuous minor fighting, with occasional episodes which, though involving only a narrow section of the front, have approached the dimensions of considerable battles. During the month we have taken just over 2,400 prisoners in some nine or ten different affairs. It has hardly, therefore, been an idle or barren month.

The great majority of these prisoners have come from the left of the line, from the region between Thiepval and Le Sars. On October 9 and 10, 460 Germans fell into our hands in the neighbourhood of the fighting about the Stuff Redoubt. On October 15 between Stuff and Schwaben Redoubts we again gathered in 350. From the same neighbourhood on October 21 and 22 we took nearly 1,200, with an additional 41 two days later. From the right of the line we got 150 prisoners between Gueudecourt and Lesbœufs on October 12, and from the trenches north-east of Lesbœufs nearly the same number on October 28. Since then there have been two minor hauls, each of less than half a hundred, in the same direction. With the prisoners we have also gained much important ground.

VALUABLE GROUND GAINED.

The ground gained has been especially valuable on the left, about Schwaben and Stuff Redoubts and to the east thereof. Here the land everywhere falls steeply from the top of the ridge to the floor of the Ancre valley, and by "steeply" I mean that it drops an average of over 150ft. in a distance in some places of less than 1,000 yards and nowhere of much over 1,500. Along all this section of the front, a stretch of approximately 5,000 yards from above Thiepval to the north of Courcelette, where our line runs almost due east and west, we hold the very edge of the ridge, and we know that there was no part of all this battle area to which the enemy attached greater importance or of which his troops had more imperative instructions to keep possession. The number of prisoners which we have taken in each advance here is evidence enough of the strength in which trenches and redoubts were held, even if we had not copies of the German orders commanding the holding of the positions at all costs.

From above Courcelette, where the ridge curves southwards, the descent is much more gradual. From the highest ground about the Windmill by Pozières it is 5,000 yards due north to the level of the river at Miraumont, and about an equal distance from the summit at High Wood due north to Warlencourt. Our present line is 4,000 yards north of High Wood and less than 1,000 yards south of Warlencourt. To the east and south of here again the descent is even more gentle and irregular, the downward slope being interrupted by long folds or minor spurs in the ground, especially by one which runs north-westward, or across the normal line of our advance, from between Lesbœufs and Le Transloy to the north of Gueudecourt. Next to the capture of the ground beyond Schwaben and Stuff Redoubts, the slow working of our way on to and across this minor ridge has been the chief operation of the month.

In the rain and mud it has been heavy work and it is not yet completed. Much the greater part of this local high ground, however, is now in our possession, and we are almost as close to Le Transloy here as we are to Warlencourt on the left. Where we would be by now if the weather during the month had been fine and we had had dry ground to fight over, it would be injudicious even to hazard a guess. As it is, one has been compelled to speak of all the incidents of the month as minor affairs, and to treat them lightly, but you must not on any account therefore underestimate the month's achievement or the quality of the performance of our men.

THE FOURTH GERMAN LINE.

, NOVEMBER 9, 1916.

CANADA THE LENDER.

A GREAT ACHIEVEMENT IN WAR FINANCE.

MR. MCKENNA'S TRIBUTES.

A luncheon was given by the Empire Parliamentary Association in the Harcourt Room, House of Commons, yesterday to meet the Hon. Sir Thomas White, Canadian Minister of Finance. Mr. MCKENNA presided, and in proposing the toast of "Canada and the War," said that when war broke out, among all the uncertainties of the time, there was one fact which was never in doubt—the solidarity of the British Empire. We had seen—and we were not surprised—the spectacle of magnificent devotion, of soldierly courage and endurance, and of heroic success which have added a new page of lustre to the history of our country, though we were not surprised by the spirit, by the effort, by the loyalty, and the courage, for his part he confess that he had been astonished by the power of the Dominions.

Who could have believed at the beginning of the war that Canada was to develop a power of munitionment far beyond anything that any country in the world outside Germany had known? Who could have believed that Canada, which year by year, for internal development, found it necessary to borrow in the money market of London, was to become not a burden, but an aid to the Mother-country? Who would have thought that Canada, which was now approaching towards the ideal of contributing half a million men to the Army, would end by sending out from her shores more soldiers than this country sent to South Africa in the course of a three years' campaign, in an effort which at the time we thought was gigantic? Yet all this had been done under our eyes, and we had found in our Dominions a most perfect support for our old age.

They had among them that day the Finance Minister of Canada to whom they owed—in a branch of the war on which he might claim a right to speak—more than he could well express. In the field of finance Sir Thomas White had met with such deserved success, which was so well understood and appreciated in this country as well as in Canada, that it would be out of place for him to say anything about Sir Thomas personally. Let him merely remind them that Canada, the borrower, under his financial leadership, had become Canada the lender. The balance of trade, which formerly year by year was against Canada, had now by the successful development of her resources become hugely in her favour. In this country we were proud that even in the midst of war we raised by taxation some part of the cost of the war. We were only following the example of Canada. He was sure that our enemies, and most of all, our Allies, would more gladly copy us in that respect than in any other. The financial security which arose from the knowledge that we were not only paying our way and providing for all the debt we were incurring, but that we were contributing towards the immediate cost of the war, and that we would have the means for remission of taxation after the war—that knowledge was something which gave credit in the world, and it was something which was known in this country and in Canada. Sir Thomas White's success had been a most remarkable event in his successful country, and he hoped he would tell them what the efforts of Canada had been. (Cheers.)

ANOTHER 120,000 MEN FROM CANADA.

SIR THOMAS WHITE, who had an enthusiastic reception, said he was gratified to be the guest of the Empire Parliamentary Association. In Canada they watched the proceedings in the House of Commons, and followed the careers of their political leaders with the greatest interest. Since the outbreak of war he had had much important business with the present Chancellor of the Exchequer, and with his predecessor, Mr. Lloyd George, who was as popular in Canada as he was in the United Kingdom, and in all his negotiations with Mr. McKenna he had found a spirit which was truly imperial in the best sense—broad, generous, considerate, and appreciative.

The war, he continued, was the only question of paramount importance before the Empire to-day. Canada believed that they were fighting in a just cause and for the integrity of the Empire. They had sent a quarter of a million soldiers, and every transport was bringing more. There were in Canada to-day awaiting transport 120,000 of as fine troops as could offer their service and lives to the Empire. Nobody ever thought before the war that a heterogeneous population of eight millions would have sent 370,000 men to fight overseas.

In Canada the one thing they did not want was a doubtful or precarious peace. The war had taught them that the future policy of the Empire must be directed to conserving those resources which were vitally necessary for the purposes of defence. In Canada they had discovered that their industrial establishments were really bulwarks in time of war. If they could reach the conclusion that such a policy could best be prevented by a system of preference within the Empire they were at least certain that it was only a matter of domestic concern. We had been too cosmopolitan. There was something to be said for cosmopolitanism, but we had found something which he did not suspect. The face of the world had changed, and he thought they must realize the value of British stock to the British Empire in a time of national emergency. Out of the problems which the Dominions would take up, and to which the United Kingdom should turn its attention, was the promotion of emigration to the Oversea Dominions.

DEFENCE OF THE EMPIRE.

In regard to defence, he remarked that if we were to continue to have the great liberty which we possessed we must be prepared to defend it against external menace and assault. He was not among those who thought that the *status quo ante* would be the result after the war. He believed the people of the Empire were prepared to make any sacrifices that they might be called upon to make for the winning of the war. Personally he had no apprehension with regard to that matter. Members of their Governments had been given an opportunity for leadership and for showing the world unity of purpose in connexion with this war such as had never been given to men in the history of free institutions. (Cheers.)

SIR JOSEPH WARD proposed the health of the chairman, and Mr. MCKENNA briefly expressed his thanks.

Those present were:—

Sir G. Perley (Acting High Commissioner for Canada), Mr. W. F. Massey (Prime Minister of New Zealand), Sir Joseph Ward (Prime Minister of New Zealand), Mr. Hayes Fisher, Mr. Herbert Samuel, Mr. Lewis Harcourt, Mr. Walter Long, Sir William Robertson (Chief of the Imperial General Staff), Lord Shaughnessy, Earl Grey, Sir R. Finlay, Lord Emmott, Lord Burnham, Lord Blyth, Lord Meath, Lord Crawshaw, the High Commissioners for South Africa, Australia, and New Zealand, Sir O. Philipps, Lord E. Talbot, Mr. de F. Pennefather, Mr. Cathcart Wason, Sir G. Parker, Lieutenant-Colonel H. Page Croft, Sir C. S. Henry, Mr. W. R. Campion, Mr. A. Bigland, Sir W. Pearce, Sir C. J. Cory, Sir L. Worthington Evans, Mr. T. P. O'Connor, Sir John Jackson, Sir C. Kinloch-Cooke, Mr. Keating, Mr. S. Collins, Sir E. H. Carlile, Mr. F. Parkes, Mr. S. Roberts, Major Sydney Goldman, Mr. H. J. Mackinder, and Mr. Will Crooks.

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Apr. 1926

obit.

SIR ALEXANDER BERTRAM.

CANADA loses a distinguished citizen and a loyal servant by the death of Sir Alexander Bertram. To the man in the street he was known principally as the driving force behind the great shell manufacture undertaking in Canada during the early period of the war. But few people, it is probable, ever stopped to think why he should have been chosen to direct this important work. The reason was a simple one. He was considered at that time to be the greatest organizer of skilled labor in this Dominion. He was a specialist on the manufacture of machinery. The Government wanted machinery on the ground to be adapted to the manufacture of shells in vast quantities. Obviously Alexander Bertram was the man for the job. He enjoyed the confidence of many other employers of labor, who recognized his organizing genius, and who co-operated with

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SIR A. BERTRAM OF WAR FAME, IS CALLED BY DEATH

After Brief Illness Montreal
Knight Dies in West-
mount

WIDELY KNOWN

Business and Social Friends
Not Limited to This
Continent

Known throughout the Dominion and the Mother Country for his services in the production of munitions during the war, and as an industrialist of outstanding reputation, Major-General Sir Alexander Bertram, K.B., died at his home, 315 Kensington avenue, Westmount, on Saturday morning, at the end of a brief illness, in his 74th year.

True to his own rule of life, Sir Alexander remained in harness almost to the end, and was at his office directing the affairs of John Bertram & Sons Limited until within a few days of his decease. Though a Montrealer only since 1912, he had a very wide circle of friends and his business acquaintances were distributed from coast to coast, south of the borderline, and in the Old Country. Outside of his tremendous war effort, he was universally respected in the light of his 30 years' excellent business record.

Socially, the dead knight held memberships in a number of clubs. He was an ardent golfer, and also was actively interested in the Railway Club and the Rotary Club of Montreal. Curling and bowling were among his favorite pastimes. Locally, he held membership in the Thistle, Beaconsfield and Senneville clubs, while the Mount Royal, the St. James, the Rideau, at Ottawa, and the Hamilton Club will also mourn his loss.

Always much interested in Masonry, he was an active member of the Westmount Lodge, No. 76. In religion he was a Presbyterian and a member of St. Andrew's United Church, Westmount.

When the C.P.R. train leaves tonight, it will carry to Dundas, Ont., where he first saw the light of day in 1853, and where he spent most of his life prior to coming to Montreal, the remains of one of the noblest of her sons, whose success in his career was outshone only by his service to his country in dark days, and the breadth of his friendships, both at home and abroad.

Rev. Dr. Clarke, of St. Andrew's Church, is conducting a service at the residence at 5 o'clock today. Burial will take place at Dundas tomorrow afternoon at 3 o'clock.

EARLY TO WORK.

Son of John Bertram, of Dundas, Ont., a well-known machinery manufacturer, Alexander Bertram was born on February 18, 1853, and at the early age of 14 went to work in his father's shops; the beginning of a life's work, which was to bring him an international reputation. To the day of his death, he was head and active director of the firm.

Until 1912 he lived at Dundas, extending his affairs throughout the country, and it was in 1912 that the operations of the company had reached such magnitude that he felt it necessary that he personally should come to Montreal to supervise matters from here. He was then head of a family, having married Eliza Millicamp Smith, daughter of Hugh Thomas Smith, of Toronto, in 1877, who survives him, and in addition there are three sons and one daughter, namely, John H. Bertram, of Grimsby, Ont.; Harry A. Bertram, of Montreal; Thomas S. Bertram, also of Montreal, and Florence, wife of F. J. Sharpe, Montreal. He is also survived by three brothers, Henry Bertram, secretary-treasurer of John Bertram and Sons Limited, at Dun-

das, Ont.; Dr. T. A. Bertram, Dundas, Ont., and Jas. B. Bertram, superintendent of the plant. A sister, the wife of Dr. Stirling, died in England a number of years ago.

Faced with the problem of shell output during the war, the Dominion Government selected General Bert-



THE LATE SIR ALEXANDER
BERTRAM.

ram to head the Shell Committee, the activities of which have long since become history. Enjoying at all times the fullest confidence both of the Government and those called on to work with him, he raised the Canadian output from a contribution of 18-pounder shells, to a wide range of calibres for the use both of the Empire forces and the Allies. To do this, workshops had to be built, firms had to be interested in lines wholly foreign to their own; but to the surprise of the British Government, Canada, which in 1914 had not even been counted in the shell producing possibilities of Empire, ranged to the forefront in 1915, under Sir Alexander Bertram's generalship, which brought him his major-general's rank in 1916, closely followed by knighthood.

DISTINCTLY CANADIAN.

The munitions made in Canada were a distinctly Canadian product. All the materials used were Canadian, lead bullets, steel portions, cartridge cases, brass fittings, and later on the explosives themselves. The C.P.R. Angus shops alone in Montreal had 10,000 men at work, and later on the Canadian National shops at Transcona were similarly engaged. The activity was so intensified that in March of 1915, 200 factories were engaged in the task, and at even that early date the contracts awarded ran to the hundred million mark. Sir Alexander had the executive work of the shell committee to do, working in conjunction with the Minister of Militia. The business continued to grow, factories in all parts of the country being drafted into the work as orders came from Russia and Britain.

Devotion to his strenuous task claimed a heavy penalty in health, and following a breakdown in 1915 three months' rest was ordered. Associated with him on the shell committee were Col. Thomas Cantlie of New Glasgow; George W. Watt of Toronto, then superintendent of the Canadian General Electric Works; Col. Lafferty of the Dominion Arsenal; Col. Greville Harston, the British representative; and Col. Carnegie, ordnance adviser.

In the course of his administration as Minister of Munitions, David Lloyd George despatched to Canada, D. A. Thomas, M.P., later to be Lord Rhondda, paying high tribute to the efficiency of Canadian methods, at the time of his departure.

When Mr. Thomas reached Canada and had an occasion to survey the ground he declared publicly that he was amazed at the progress made in

Canada in the matter of munition making. At that time the contracts given out totalled 160 millions, distributed in 150 factories from one end of the country to the other. On August of 1915, General Bertram had his plans so far advanced that he was able to announce that Canada would shortly produce and refine here the zinc and copper needed for ammunition. Orders continued to pour into Canadian factories, reaching 250 millions of dollars in August of 1915. The war demands became still heavier, and from shells Canada was asked to turn, in addition to the manufacture of heavy guns, and still heavier shells were called for. The words of Sir Sam Hughes at this time illustrate the work which Sir Alexander and his colleagues were doing. The then Minister of Militia of Canada declared that it was months after Canada had started to make shells that commercial organizations in England had got into the business, and that not one shell had been turned out in the United States until long after Canada had been manufacturing shells, and, furthermore, said he, Canadian operation prices had been lower than those of any commercial institution in the United States or Britain, and also lower than any military arsenal in the United States.

MILITARY EXPERIENCE.

In military life, in which he was always actively interested, Sir Alexander had the experience of ranks varying from that of bugler in the 13th Regiment at Hamilton, at the age of 16, to that which he held at the time of his death. Following his enlistment in the 13th, he made rapid progress and soon became commander of the 77th Wentworth Regiment of Hamilton, and later on was appointed to the command of the 3rd Infantry Brigade, which gave him the rank of brigadier-general. He was on the reserve of officers when the World War broke out in 1914, and, being at the time in Winnipeg, and being then 61 years of age, he offered his services to Sir Sam Hughes, Minister of Militia at the time. His interest in the military organization of Canada went further than actual connection with militia regiments. He was a deep believer in the theory that young Canadians should be trained to shoot, and trained to shoot straight. The lessons of the South African War were still fresh when in 1909 he commanded the Canadian Bisley team which did so

AUTOMOBILE TIRES

\$3.50, \$4.50, \$5.50—30 x 3 1/2. Oversize, \$6.50.
\$7—31 x 4 S.S. \$9. \$9, 32 x 3 1/2.
\$9—33 x 4, 34 x 4, 32 x 4.
\$10—32 x 4 1/2, 33 x 4 1/2, 34 x 4 1/2, \$12, 36 x 4 1/2.
\$15—33 x 5, 35 x 5, 37 x 5.
Balloon Tires, 21 x 4.40, fits 30 x 3 1/2 rims, \$10.
Every tire a factory adjustment, with heavy non-skid treads. Satisfaction guaranteed. We ship everywhere. Cash with order.

HUDSON TIRE CO.,

4557 St. Denis St., Montreal. BEI. 3006.

NEW MUNITIONS BOARD

J. W. Flavelle Will Devote Himself to Its Work

(Special to The Gazette.)

Ottawa, December 3.—As an evidence of the importance attached to the work of the new Imperial Munitions Board, which has succeeded the old Shell Committee, in the direction of Canadian shell-making activities, it may be stated that Mr. J. W. Flavelle, of Toronto, the new chairman, is resigning his position on the Economic Development Commission to devote his whole time to his new duties.

Recent reports that the re-organization of the old committee would be partly for the purpose of supervising the manufacture of shells in Canada for the Allies as well as Great Britain herself were confirmed by a member of the new board. He stated that a considerable widening of the scope of the board's work might be anticipated and it is likely that its tariff will be increased as a consequence.

Shelly
put
Dec/16

Winslow personal.

10th January 1917.

George Doubleday, Esq,
President, Ingersoll-Rand Co,
No-11 Broadway, NEW YORK, N.Y.

Dear Sir:-

Our shipments for the past five weeks, up to and including January 5th, are -

<u>WEEK ENDING.</u>	<u>SHRAPNEL.</u>	<u>8-INCH.</u>
December 8th/16	17832	4000
" 15th/16	21678	5125
" 22nd/16	25350	1000 (freight embargo)
" 29th/16	17532	4134
January 5th/17	11874	5376

In spite of our showing fair shipments, our production has been limited to the amount of power we have been able to get. This week, although we will continue our shipments, the shell departments have been practically at a standstill as far as the heavy manufacturing operations are concerned. The City has two generators down on account of changing over their power dam and, possibly, as a consequence, they burned out a third large generator. Our guaranteed supply of Shawinigan power is practically assured by the end of this week.

The new man that Mr. Gilman wanted for the 8-inch department is here, and the man to help with the shrapnel department is expected by the end of the week. We are also taking on a couple of new inspectors. With these extra men, we ought to be in better shape to foresee and provide against possibility of future delays.

Yours truly,
Canadian INGERSOLL-RAND COMPANY Limited.

ESW/GTW

Manager Munitions Department.

CANADIAN RAND CO., LTD.

11 BROADWAY

OFFICE OF PRESIDENT

NEW YORK January 24, 1917.

W
E. S. Winslow, Esq., Mgr., Munitions Dept.,
Canadian Ingersoll-Rand Company, Ltd.,
Sherbrooke, Canada.

Dear Mr. Winslow:-

Thank you for your letters of the 17th and 22nd insts., showing progress on the shell contract. I really have no criticism to offer on the record down to date.

If you run out of forgings for shrapnel you cannot manufacture and ship to your capacity, and that is all there is to it. I think the number of eight-inch shells shipped during week ending January 19th is most satisfactory. In fact, I am surprised that you have been able to reach that figure in any one week. I will keep this table before me entering the shipments as you report them.

With special reference to your letter of January 22nd enclosing copy of note from Mr. Gilman at Augusta, I am not quite clear as to just how your mind is working. My idea of the manufacturing policy was, to continue to increase the output of 18-pounders and 8-inch shells as rapidly as your facilities would permit, feeling that your Munitions Board would

E.S. Winslow, Esq.

-2-

1-24-17.

continue to pass on requisitions to you as fast as they could be executed. Any alteration of this program, of course, could not be made by correspondence, and inasmuch as it will be impossible for me to go up to Sherbrooke at anytime during the next fortnight, I would suggest that you run down to see me at your earliest convenience.

I realize that you were disappointed in the program we adopted, when we decided to increase our shrapnel capacity to 35,000 a week, and also plunge on the eight-inch contract, instead of going in for any other type of shell. However, I am very anxious to know how you feel about the general situation, and trust you can find it convenient to come down here some day in the immediate future, in order that you may post me down to date on just how affairs are shaping themselves in Ottawa.

Yours very truly,

George S. ...

Price shells

Winslow personal.

15th February 1917.

George Doubleday, Esq, President,
Ingersoll-Rand Company,
11 Broadway, NEW YORK, N.Y.

Dear Sir:-

For your information and guidance, I have secured a record of the cost of machining and assembling shells in the British Government controlled shops.

SIZE OF SHELL.	APPROXIMATE COST.	PRESENT CANADIAN PRICE.	RATIO ADDED.
18-Pr shrapnel	\$1.00	\$1.50	50%
4.5 H. E.	2.00	3.25	62½%
6" H. E.	4.00	7.00	75%
8" H. E.	6.87 (actual)	18.85 (actual)	174%

The 4.5 and the 6-inch shell prices are recognized as being about as low as it is possible to reduce prices in Canada. The English method seems to be to pay day rates, the consequence being that with the smaller shells - where quick action is necessary, they do not do as well as on the larger shells, where the machine itself largely governs the output.

The English plants figure on 10% overall loss, that is to say, where they bring in 110 forgings into the shop, they expect to ship 100 shells.

Judging from their records, we might expect them to add 100% to the English 8-inch cost, giving a figure of \$13.75, and ask us to try and make shells at this rate. You will remember that the Board demanded our spending \$5 per shell for plant and equipment, and were somewhat annoyed when the Machinery Department reported that we were spending less. Five dollars from our present rate of \$18.85, would give practically the same figure as arrived at the other way. This matter will probably come up in connection with new oe

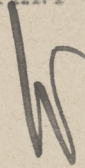
orders during the next eight or ten weeks.

Page two

George Doubleday, New York, Feb 15th/1917.....

I attach detailed sheets showing the English method of separating their charges, and covering the shrapnel and 8-inch costs. It was explained to me that the shrapnel was made up from an old record, and that they have since reduced their shrapnel costs.

Yours very truly,
Canadian INGERSOLL-RAND COMPANY Limited.

A handwritten signature in dark ink, appearing to be the initials 'W' or 'W.' with a long vertical stroke extending downwards.

Manager Munitions Department.

ESW/GTW

Enclos.

100 shells to deliver

Winslow personal.

2nd March '17.

George Doubleday, Esq, President,
Ingersoll-Rand Company,
No-11 Broadway, New York, N.Y., U.S.A.

Dear Sir:-

Enclosed herewith please find copy of contract form "A" similiar to contract covering our 8-inch shell order.

The order calls for our commencing shipment May 1st, 1917 at the rate of 4,000 shells per week, and continuing at this rate until the order is completed. Theoretically, this date should be April 16th 1917. Providing the Board supplies forgings according to their latest promise at the rate of 6,000 per week, we will complete our contract two months late. If they give us an average of 7,000 forgings per week, we will be finished on June 1st, or six weeks late. If they give us 8,000 forgings per week, we should complete our contract by May 25, or about five weeks late.

There is a tremendous amount of correspondence showing the causes of delay. The cause which they admit is the change from Mark III to Mark V, and the production records show that this cause alone was sufficient account for all the delay.

In addition we have a claim - which they will not allow that they should have given us our first forgings three months before these were actually delivered.

They also caused delay by giving us un-annealed cast steel forgings; they later changed their practice and annealed all the later cast steel forgings.

I am picki ng out the correspondence in case we have to go to Ottawa, but have concluded that - with your permission, there is nothing except the contract which there is any special reason for sending you.

The claim which I made was, that the intention of the

Page two

GEORGE DOUBLEDAY, Esq, MARCH 2ND/17.....

contract was for the Board first to give us a warning, and if the warning were not heeded, cancellation might be resorted to. But as there is now nothing which they can ask us to do, there is, therefore, no valid reason for cancellation under the terms of the contract.

We have no word from the Board officially, and are still hoping that they may decide to drop the matter.

Yours truly,
Canadian INGERSOLL-RAND COMPANY Limited.

ESW/GTW

MANAGER MUNITIONS DEPARTMENT.

Enclosures..1

Price of
shells

Winslow personal.

1st March '17.

George Doubleday, Esq, President,
Ingersoll-Rand Company,
11 Broadway, NEW YORK, U.S.A.

Dear Sir:-

8-inch shell price.

Mr. FitzGerald - Assistant to the Chairman of the Imperial Munitions Board, told us that some firms had completed their 8-inch contracts, and were crying for further work, which they were willing to do for \$10.00 per shell. Mr. FitzGerald's cancellation talk may be partly with a view to getting us into line regarding prices.

I came down on the train with the Head of the Production Department last evening, and told him that I felt that if any such price as \$10.00 per shell was put into effect, production would suffer to a greater extent than in the case of the 4.5 shells with which they had trouble. Mr. McAvity said that his recommendation and the Machinery Department's recommendation was for a price of \$12.00.

Yours very truly,
Canadian INGERSOLL-RAND COMPANY Limited.

ESW/GTW

Manager Munitions Department.

CANADIAN RAND CO., LTD.

OFFICE OF PRESIDENT

11 BROADWAY

NEW YORK March 3, 1917.

E. S. Winslow, Esq., Mgr., Munitions Dept.,
Canadian Ingersoll-Rand Co. Ltd.,
Sherbrooke, Canada.

Dear Mr. Winslow:-

I have your two letters of the 1st inst., on the subject of possible cancellation of a portion of your eight-inch shell contract, all of which gives me considerable concern.

While I realize that you are the man who can prevent any such radical action on the part of the gentlemen in Ottawa, I stand ready at anytime to go up there with you and do all I can to help you in your efforts to be allowed to finish the present contract.

I would not advise taking this matter up with Mr. Gilman at present, as I feel that it would give him unnecessary worry, which would do him no good, and, I realize that he could help us very little unless he decided to go to Ottawa himself, in which event his health might suffer. A strong appeal from him by wire to the authorities might do some good, but let us not resort to that until we have to. In the meantime you and I will try to handle the situation.

E. S. W.

-2-

3-3-17.

For your information, I will be in Washington Wednesday and Thursday of next week; at all other times I am at your disposal.

Will you be good enough to keep me advised from day to day on this all important subject.

Very truly yours,

George D. McKay
LD

3
March 9, 1917.

E. W. Gilman, Esq.,
Bon Air, Augusta, Ga.

My dear Mr. Gilman:

Mr. Winslow is now dictating a letter to you outlining the difficulties we have encountered at Ottawa.

Without going into detail, it looks like the cancellation of some eighteen thousand (18000) of the 8" Projectiles, with permission to finish the entire contract at a much reduced figure.

At the suggestion of Mr. Winslow, I propose to go to Ottawa Tuesday night and have an interview with Mr. Flavelle, and I would be obliged if you would send me a night telegram immediately on receipt of this letter, outlining any suggestions you may have as regards my attitude and arguments with the Imperial Munitions Board.

Please bear in mind that under no circumstances do I feel that you should leave Augusta and go to Ottawa. I promise you to handle this subject as delicately and forcefully as I can, always feeling that it would be more ably handled ~~in your hands~~, *by you*, but I cannot consent to your breaking your rest at present and taking the journey yourself.

After listening to Mr. Winslow's report, my first inclination was to go to Ottawa immediately without consulting you, but after due deliberation, I think I should have your best advice before making any move.

With kind regards, believe me

Yours very truly,

S. D.

March 9, 1917.

E. W. Gilman, Esq.,
"The Bon-Air",
Augusta, Ga.

Dear Mr. Gilman:-

I have just reported to Mr. Doubleday on an interview which I had with Mr. Flavelle in Ottawa two days ago.

Mr. Flavelle told me that the Board proposed to let our contract for 8" shells die a natural death on April 16th, being fifty (50) weeks from date of contract. I protested vigorously and told Mr. Flavelle that to this fifty (50) weeks would have to be added a period commensurate with the delays which we had suffered and that in more than doubling our contract capacity we had already done more than our share in making up for these delays. Mr. Flavelle claimed that all delays due to the Board were made up for by their being good enough to supply us 6,000 forgings per week, or 50% more than they had contracted to, and that if we could not finish in time on that basis it was our own fault. I told Mr. Flavelle that we could do ~~than~~ better than we are doing, and were only held

E. W. Gilman, Esq.

-2-

3/9/17.

back by an insufficient supply of forgings. Mr. Flavelle said they did not require shells, and that he would not approve of supplying us more than 6000 forgings per week.

Based on the deliveries shown on progress report for week ending March 2nd and on future deliveries of 6000 shells per week, Mr. Flavelle drew a line under April 13th as being the approximate number of forgings which he considered we should be given. Before I left he made the proposition to give us the amount shown opposite May 25th for 181,262 forgings. He called in Mr. Fitzgerald to make a note of this. I told them that I did not consider that the matter had been treated on its merits; that they had not made any real effort to analyze the delays, or the effort and expense we had made to correct the delays; nevertheless, I would report what he proposed to Mr. Doubleday.

I have asked Mr. Doubleday, and he has consented, to accompany me to Ottawa next week to see if we can prevent any cancellation, or if this is impossible, to try and make a further compromise. Practically all the large shell manufacturers have been tackled on this matter and all are making protests, the results of which are not yet known.

Yours very truly,

E. W. Gilman, General Manager
Canadian Ingersoll Rand Co.
Hotel Bon Air
Augusta, Ga

Wire Received - steel plants are short of
coke - Forging plants short of steel -
machining plants short of forgings -
Regarding freight trouble, we are making
up train load eight inch ^{forgings}, because
cannot get individual cars moved from
Montreal. Shortage will allow us
only five thousand eight inch forgings
per week instead of nine thousand -
~~American development cannot help~~
~~matter unless American Government~~
use extreme discretion we might be
further embarrassed for coal, coke, steel
and forgings.

~~Have no prospects for using surplus~~
~~machining capacity.~~

No further machining requirements in view
except four point fives.

(signed) Canadian Ingersoll Rand
Winslow

Canadian INGERSOLL-RAND COMPANY Limited,
 Sherbrooke, Que. Mar 13-17

8-INCH SHELL SHIPMENTS.

<u>WEEK ENDING.</u>	<u>QUANTITY.</u>	<u>REMARKS.</u>
May - 12 - 16	120	
" 19 - 16	0	
" 26 - 16	120	
Jun 2 - 16	240	
" 9 - 16	240	
" 16 - 16	120	
" 23 - 16	360	
" 30 - 16	360	
July 7 - 16	600	
" 14 - 16	360	
" 21 - 16	480	
" 28 - 16	1080	
Aug 4 - 16	960	
" 11 - 16	1560	
" 18 - 16	1680	
" 25 - 16	2040	
Sep 1 - 16	2280	
" 8 - 16	2520	
" 15 - 16	2900	
" 22 - 16	1250	Change from Mark III to Mark V.
" 29 - 16	750	
Oct 6 - 16	1500	
" 13 - 16	3250	
" 20 - 16	2250	
" 27 - 16	3240	
Nov 3 - 16	1500	Mistake in inspection re smooth bore.
" 10 - 16	2995	
" 17 - 16	3625	
" 24 - 16	2750	Trouble caused by inspection error.
Dec 1 - 16	3238	Visit of Mr. Fry, new District Inspector
" 8 - 16	1000	Power breakdown
" 15 - 16	5125	Power shortage.
" 22 - 16	1000	do.
" 29 - 16	4124	do.
Jan 5 - 17	5376	
" 12 - 17	3750	
" 19 - 17	6378	
" 26 - 17	5000	
Feb 2 - 17	6250	
" 9 - 17	7500	
" 16 - 17	5000	
" 23 - 17	6000	
Mar 2 - 17	6500	
" 9 - 17	4500	Power shortage & insufficient shells in operation.

? Price of Shells/17

Winslow private.

19th March '17.

George Doubleday, Esq, President,
Ingersoll-Rand Company,
11 Broadway, NEW YORK, N.Y., U.S.A.

Dear Sir:-

Our 8-inch shell contract is to run out on the first of June and it is necessary for me to immediately try to secure further work. Undoubtedly the Imperial authorities require shells in general but in the case of the 8-inch and 9.2-inch, Canadian deliveries were so slow that the authorities appear to have provided themselves with sufficient capacity in England. Consequently our effort is like going after business which has been lost to a competitor. If the English authorities give us back this business it will be necessary for them to switch some of their own plant on to other work.

The above is the best information we have and we are forced to make our plans for getting the business based on this information.

There are two things which will influence the decision. The British must have confidence in the supply which we can give them and they must be satisfied regarding the price. I will look after the first matter insofar as anything we can do. With regard to price I must ask what the Company wish me to do.

In looking into this matter I think we would do well to consider the English costs for shrapnel, our costs for shrapnel, the present prices for shrapnel and compare these figures with corresponding figures for 8-inch shells.

18-Pounder Shrapnel.

Price (gross).....	\$1.50	<i>Cost low</i>
Deduct for freight and small components (approximately).....	.05	
Price (net).....	\$1.45	
Cost (average).....	.60	
PROFIT- - - - -	\$0.85	

English cost 18-Pounder Shrapnel..\$1.00.

George Doubleday, NEW YORK, March 19/17.....

8-inch Shell.

Cost (with no lathe building).....\$5.00

English cost 8-inch shell.....\$5.16.

On account probably of our piece work methods, our cost for the shrapnel which requires great speed on the part of our operators, is 40% under the English cost. They think we need some "Protection" and some profit. Consequently, they seem willing to pay us 142% more than our cost and about 50% more than their cost.

In the case of the 8-inch, however, their costs are only 3% more than ours and moreover they would have to go to some trouble and expense to change over their machines to other work if we are to be given the 8-inch work.

The English cost plus 50% would give approximately \$7.75. This is too low because they are paying \$7.00 for the 6-inch shell. The other English cost which I mentioned to you of \$6.87 included some allowance for amortization. This cost plus 50% would give approximately \$10.30. The mean between these two is about \$9.00.

In bidding for the contract on which we are now working, the Shell Committee asked us to bid on 1000 per week and they estimated a fair price to be \$21.00. We bid as follows:-

5000 per week.....	\$18.50
3000 " "	19.25
2000 " "	21.00
1000 " "	22.55.

In the present case, Mr. Flavelle first mentioned a price of \$10.00, then said the price would probably be even lower and finally said he could not get us an order at any price. I consider that the price which we quote at the end of this week or the beginning of next week will largely influence whether or not the English authorities arrange to give us further orders and will probably determine the price at which orders will be given. I am practically certain that we are in a position to quote much lower than any other 8-inch shell manufacturer and in this case I do not think it safe to jeopardize our chance of further work by making our chance depend on the prices other people may feel inclined to put in. The latter is what we have always done in the past because we knew that the business had to be placed.

So I suggest a definite proposal being put in not later than the end of next week providing I cannot by that time find that the 8-inch

George Doubleday, NEW YORK, March 19/17.....

shells are going to be ordered without our taking this step. I have drawn up the following schedules for consideration -

QUANTITY PER WEEK	SUGGESTED PRICE.	JANUARY COST.	DIFFERENCE.	ESTIMATED PROFIT.
6000	\$9.50	\$5.00	\$4.50	\$27,000.00
7000	9.30	5.00	4.30	30,100.00
8000	9.15	5.00	4.15	33,200.00
9000	9.00	5.00	4.00	36,000.00
6000	\$9.25	\$5.00	\$4.25	\$25,500.00
7000	9.05	5.00	4.05	28,350.00
8000	8.90	5.00	3.90	31,200.00
9000	8.75	5.00	3.75	33,750.00
6000	\$9.00	\$5.00	\$4.00	24,000.00
7000	8.80	5.00	3.80	26,600.00
8000	8.65	5.00	3.65	29,200.00
9000	8.50	5.00	3.50	31,500.00
6000	\$8.75	\$5.00	\$3.75	\$22,500.00
7000	8.55	5.00	3.55	24,850.00
8000	8.40	5.00	3.40	27,200.00
9000	8.25	5.00	3.25	29,250.00

The comparison with shrapnel should show -

QUANTITY PER WEEK	NET PRICE	JANUARY COST.	DIFFERENCE.	ESTIMATED PROFIT.
35000	\$1.45	\$0.60	\$0.85	\$29,750.00

and shrapnel cost per week - 35,000 @ \$0.60.....\$21,000.00,

whereas the 8-inch shell cost would be between -

6,000 @ \$5.00.....\$30,000.00 and
9,000 @ \$5.00.....\$45,000.00.

My present feeling would be in favour of putting in a quotation on a sliding scale urging at the same time the advisability of keeping the plant running. And my present choice would be in favour of either the second or the third schedule with permission to use the fourth schedule as a last resource if the first quotation does not bring results.

We are enclosing copy of the Munitions Board's letter of cancellation dated March 16th/17, and our letter of same date sent through Mr. Sullivan and remailed to the Board today. Also my acknowledgement of the Board's letter of the 16th.

Page four

George Doubleday, NEW YORK, March 19/17.....

I am sending all correspondence in duplicate so that copies
can be forwarded to Mr. Gilman if you wish.

Yours very truly,
Canadian INGERSOLL-RAND COMPANY Limited.

ESW/GTW
Enclosures.

MANAGER MUNITIONS DEPARTMENT.

Winslow personal.

MARCH 20TH
1917.

GENERAL MANAGER, Hotel Marlboro-Blenheim, Atlantic City, U.S.A.

I have your letter of March 17th with regard to 8-inch shell work, and note that you are not surprised that they would not give us an extension to our present contract beyond June first, and that you are surprised that no further work is promised.

I believe Mr. Flavelle when he says that the Canadian deliveries were delayed to such an extent that the authorities have provided in England sufficient capacity for 8-inch and 9.2-inch shells. But I do not think it is certain that they would not change over some of these plants to other work if they felt that they could transport the shells, that deliveries were certain, and that prices bore some relation to English costs. I do not believe that the transportation difficulties would prevent the work being carried on. I do think that, as reasonable deliveries only started from Canada two or three months ago, they have hardly had time to receive and test the first shells in England since they have been coming in useful quantities. I think there is a good chance of making them feel secure on this point between now and May.

With regard to price. We know that their cost is \$5.16, and we have to figure what "Protection" they think that we require, and what profit they think we should get.

To secure an order for these shells, is like going after business that has been lost to a competitor. The English will have

GENERAL MANAGER, Atlantic City, U.S.A., (March 20/17).....

to go to some expense to change over their plants in order to allow us to ship from here.

Our costs and the length of our contract, has put us in a much more favourable position than any other Canadian manufacturer. The only danger to us is that the other manufacturers may not be able to come down to a reasonable price, and a general policy of not using Canadian 8-inch and 9.2-inch shells might, therefore, result. I wrote Mr. Doubleday yesterday on this matter and had intended getting some advice from him before bothering you.

I am giving a great deal of thought to the whole matter. There are thirty or forty very important concerns affected, so that the matter is not likely to be disposed of without due consideration.

When I hear from you and from Mr. Doubleday as to our policy regarding price, I will go and personally see the other manufacturers. In the meantime, I have suggested to the Secretary of the Montreal Shell Manufacturers Association that time should be given at their next meeting to decide on what is best to be done; whether we should all go as a deputation to Ottawa or, just what plan will be most effective.

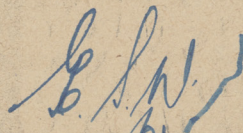
Your telegram of March 20th seems to me very hasty. Surely it is not necessary for us to provide - on the 20th of March, for everything that may happen on the 1st of June? There is every reason for the Board's telling us that there are no further orders. Our prices and deliveries - from the English point of view, have been terrible, and it may take us a month or two before we can convince them that we are now in a splendid position to turn out these shells both from the point of view of quantities and price. I am, however, much afraid

Page three

GENERAL MANAGER, Atlantic City, U.S.A., (March 20/17).....

you may influence the shop into falling further behind on our schedule, and having further quantities cancelled. We are not making any extensions to 8-inch work; I have not told anyone that our order is definitely cancelled and I think it is absolutely premature to frighten our men away with the bogey that our work may stop on June 1st. Will you not give us a month more at least, before this matter is discussed in the way you suggest.

Yours very truly,



MANAGER MUNITIONS DEPARTMENT.

ESW/GTW

Winslow Personal.

22nd March 1917.

Mr. E. W. Gilman,
Hotel Malboro-Blenhiem,
Atlantic City, N.J., U.S.A.

Dear Sir:-

I omitted replying to your favour of March 3rd, in which you made a comparison between the Fairbanks shrapnel production and our shrapnel production.

To get a true comparison, we have to bear in mind that we, on a clearly defined policy, favoured the 8-inch contract at the expense of the shrapnel, and, therefore, it is necessary to compare the production as a whole.

On March 9th, we had made 113,863 8-inch shells and 1,383,353 shrapnel shells. The Fairbanks Company, on the other hand, had made approximately 61,000 8-inch shells, and I assume about half a million more shrapnel than we had. It is clearly evident that if they stop their 8-inch on June 1st, they will hardly break even, and, therefore, they would have to be between one and two million shrapnel ahead of us to make up. Clearly, the comparison is in favour of our own shop.

Yours very truly,
Canadian INGERSOLL-RAND COMPANY Limited.

Manager Munitions Department.

ESW/EPS.

CANADIAN RAND CO., LTD.

11 BROADWAY

OFFICE OF PRESIDENT

NEW YORK March 26, 1917.

E. S. Winslow, Esq.,
Mgr., Munitions Department,
Canadian Ingersoll-Rand Company, Ltd.,
Sherbrooke, Canada.

Dear Mr. Winslow:-

I am enclosing original personal letters from Mr. Gilman under dates of March 23rd and 24th, also copy of a letter I have written him this morning, and would thank you to be guided accordingly.

I will be glad to have you proceed in your own way to get a renewal of the 8-inch contract along the lines outlined by Mr. Gilman.

So far as the shrapnel is concerned, I think my position is fully set forth in my letter to Mr. Gilman.

I shall not agitate this subject at all with Mr. Fuller, but await developments, and if Flavelle or he communicates with me regarding a conference I will call you up on the telephone before making any move.

On returning from Ottawa Henry Fuller reported to me that Mr. Flavelle had notified him that he was to stop all 8-inch work on June first. Fuller's answer was,

E. S. W.

-2-

3-26-17.

"All right, I will finish up my entire contract of 150,000. on that date."

Flavelle further told Fuller that we would all be allowed to turn out sharpnel to our capacity through September.

Copy of your letter of the 23rd to Mr. Gilman which reaches me this morning is very disturbing, and I am wondering just how seriously shop conditions will affect deliveries of sharpnel and just what suggestions you are going to make to overcome your troubles.

Wishing you success in your efforts to secure another order for the 8-inch shells and hoping to hear from you at your earliest convenience, I am,

Yours faithfully,

ENC.

Winslow personal.

28th of March
Nineteen seventeen.

George Doubleday, Esq., President,
Ingersoll-Rand Company,
11 Broadway, NEW YORK, N.Y., U.S.A.

Dear Sir:- SUB: FUTURE CONTRACTS EIGHT INCH SHELLS.

I have your letter of March 26th enclosing original personal letter from Mr. Gilman dated March 23rd authorizing me to go after 8-inch future contracts to the best of my ability on the basis of the second schedule of the third page of my letter, but cancelling the last line as we only want a maximum of eight thousand per week.

I have arranged for a conference of the 8-inch and 9.2-inch Montreal manufacturers to be held tomorrow afternoon. I have also some letters from the out-of-town manufacturers. At the meeting I will try to get their co-operation in pressing for future business. At the meeting I do not propose to give out our definite decision regarding price.

I will report to you what action, if any, the meeting decides. Probably the action will be to organize a larger meeting and go to Ottawa as a deputation.

Yours very truly,
Canadian INGERSOLL-RAND COMPANY Limited.

ESW/GTW
Copy to Mr. Gilman.

MANAGER MUNITIONS DEPARTMENT.

Winslow personal.

28th of March
Nineteen seventeen.

George Doubleday, Esq., President,
Ingersoll-Rand Company,
11 Broadway, NEW YORK, N.Y., U.S.A.

Dear Sir:- SUB: FUTURE CONTRACTS 18-POUNDER SHRAPNEL.

I have your letter of March 26th enclosing original personal letter from Mr. Gilman dated March 24th regarding future orders for 18-Pr. shrapnel.

I am sorry that Mr. Flavelle was able to get from Mr. Fuller at this time an admission that he was willing to make shrapnel at \$1.25. Mr. Flavelle had Mr. Fuller at a disadvantage on account of the 8-inch cancellation matter being under consideration at the same conference. And unfortunately Mr. Fuller had stated a year ago that it was possible to make shrapnel at \$1.25, which statement was corrected by Mr. Brookes of Toronto and nothing came of it at the time.

Up to the present we have always thought it possible to persuade the Board that a flat price was the proper thing, and in that way we have been protected in price by the smaller manufacturers.

I am afraid of a conference of Mr. Fuller, Mr. Coleman and ourselves separating us from the rest of the field. Consequently, I would be disposed to side-track the idea and to let all the other manufacturers in on the secret. In that way, I see a good chance of the small manufacturers again supporting us in the matter of price, otherwise, we would play into Mr. Flavelle's hands. He will not be satisfied that a .25% cut given on the spur of the moment is the best we can do, and after he has got us down still lower, he will try to squeeze the other manufacturers down to our level. I would suggest not having a meeting with Mr. Coleman and Mr. Fuller for a month or six weeks, and if Mr. Flavelle follows us up in the matter I think we can say we are taking the matter up by correspondence with Mr. Coleman, and

Page two

George Doubleday, Esq, MARCH 28TH/17.....

we are also discussing the matter with some of the other manufacturers
in an endeavour to make as fair an offer to the Board as possible.

Yours very truly,
Canadian INGERSOLL-RAND COMPANY Limited.

MANAGER MUNITIONS DEPARTMENT.

ESW/GTW
Copy to Mr. Gilman.

*Good Ref
Winslow*

C O P Y.

March 26, 1917.

Dear Mr. Gilman:-

I have your letters of March 23rd and 24th, and will transmit your 8-inch shell instructions to Winslow.

The Chief of the Bureau of Ordnance for the United States Navy has told us that they have all of the 7-inch and 8-inch shells they need; that their requirements will be for 12-inch shells hereafter.

We are now offering the Sherbrooke equipment to the Bureau of Ordnance for the Army, telling them that we will be glad to take on a contract for 8-inch shells after June 1st, ultimately turning them out at the rate of 8,000 per week, and will have a force of approximately 1,000 men in this department if they can give us a satisfactory contract. They have evinced much interest and have the offer under consideration, but they are so disorganized down in Washington right now that it is a question in my mind if they could take advantage of this opportunity before the time expires.

In the meantime, I quite agree with you that Winslow should leave no stone unturned to get future British 8-inch work at lower prices.

As regards sharpnel: I will be very glad to represent your Company if a conference between Fuller, Coleman and myself is arranged in New York, but I would not, under any circumstances, consider having such a conference without having Winslow at my elbow.

If the meeting is to be held in Canada, I will go up there because Flavelle has asked me to, but I will certainly take Winslow with me and let him do the talking.

Yours very truly,

GEORGE DOUBLEDAY.

E. W. Gilman, Esq.,
Marlborough-Blenheim,
Atlantic City, N.J.

✱

CANADIAN RAND CO., LTD.

OFFICE OF PRESIDENT

11 BROADWAY

NEW YORK April 9, 1917.

E. S. Winslow, Esq.,
Manager, Munitions Department,
Canadian Ingersoll-Rand Company, Ltd.,
Sherbrooke, Canada.

Dear Mr. Winslow:-

I am in receipt of your letters of the 7th.

Please accept my congratulations on the result of your interview with the Ottawa people. I am very glad I kept out of this controversy. As a matter of fact, I am always willing to keep out of anything when I feel that someone else can handle it better.

With reference to future orders for 8-inch shells: The Bureau of Ordnances, for both the United States Navy and Army, have declined to interest themselves in the capacity of our Sherbrooke plant. This is as I expected, and I am quite as well pleased.

Trusting you will get some results from the work you are doing through Mr. Gordon, I am,

Yours faithfully,

George W. ...

CANADIAN INGERSOLL-RAND CO., LIMITED,

HEAD OFFICE - MONTREAL, QUE.

COPY TO Mr. N. M. Campbell

Connaught Sta. P.O. July 22nd.17

Dear Southee,

Very much obliged for your offer. There are three "IFS" in the way. First of all, I have made good with W. Watson, which is no little achievement because it means a good name with the strongest family of engineers in this North Country. I am making more money than the C.I.R. Co. ever paid me. There is the first "IF" Next in importance I am no longer in the first bloom of youth and innocence, and frankly I know I am not physically fit to demonstrate drills day in and day out. I take hold of a machine quite often now to show some thickheaded Finn how, but I know I cannot do it steadily, so if you think of me demonstrating to any extent, why point your camera the other way. The last "IF" is just how the arm-chair brigade are going to take this. If they still want to sell drills from the shop point of view, that is to never make a change till their jigs and templates of the old style are worn out, why they are going to have no use for me. You know that I could always tell them a year ahead what changes were wanted on their drills, , and they all loved me just like a pet rattler. And you are going to hand yourself a nice little bouquet of thistles if you stampede them into bringing me under these conditions. If I go to a mine and see a rotten drill, it is going to be impossible for me to report and say the machine might possibly have been better finished" the report is going to read "this drill is absolutely rotten" You see Southee I know Ben Cooke, for I have lived with him a long time. On the other hand my experience here leads me to think that those evil days are about over. The three

*Amusing
letter from
Ben Cooke*

*Mr. Southee
and Mr. Campbell*

*Ben Cooke
good letter*

Jackhamers I have used here were absolutely perfect and are in the same condition to-day. I have had them all apart to the last bolt and nut and have calipered them very carefully for wear and ~~tearx~~ also defects in manufacture, and have to hand into the Shop, they are perfect in every respect. The #248, of course, came from Phillipsburg and is easily up to their standard. Of course, my inclination is all to the happy family. I have been inclined to write Mr. Campbell re these Jackhamers, and I gusee I will next mail. I would sooner handle Rand drills than boss the Hollinger for twice the money, even so I am going to sell my experience, and am not goint to make a present of it to a Corporation that is perfectly able to pay for it. Anyhow, old timer, by all means come along on your next trip North and we will talk it all over.

Again I am trying to thank you for your good opinion,

Good-night,

Yours truly,

sgd. BEN COOKE

COPY TO 

FROM
CANADIAN INGERSOLL-RAND CO.,
LIMITED

Personal. TORONTO ONT.

Mr. E. W. Gilman, General Manager. Montreal, Que.,

Business.

Toronto. Aug 18/17.,

*General letter
Sudbury
for G.W.S*



XXXXXXX

Dear Mr. Gilman:-

Your kind letter of the 16th to hand requesting a report upon conditions throughout this district. I mailed you such a report a day or ago, which, no doubt, has reached you here this. One should have been sent you sooner, but the fact is that since arriving here on July 23rd, I have not slept in the same bed on three consecutive nights, having been on the jump steadily from one part of the district to another.

There is a vast amount of industrial work coming to a head in this district which will necessitate the installation of some compressors of a very nice size and these jobs have to be nursed along and I wished to get them all worked up in such shape that Mr. Bowman would have no reason to complain when he returned to take hold of them.

In addition to above there is a vast amount of rock work and mining throughout this province to which I have simply been unable to devote the proper amount of time. At present have a deal up with the Kirkland Porphyry Gold Mines, whose head office is in town here, for a \$5,000.00 or \$6,000.00 mining plant. Have another deal up with Mr. F. L. Culver of the Beaver Mines for a compressor for his Kirkland Lake property. We should secure both of these. There is another compressor job up with Fred Connell of this town for a compressor plant for his mine near Port Arthur, which is in Carter's territory. This deal should close next week.

The above is only an example of what mining deals will be coming along from time to time, provided conditions undergo no material change during the next year.

We must not forget that Hydro proposition at Niagara Falls. My personal opinion is that they will not be doing much drilling before winter, but when they commence it is going to be an immense proposition and worth a good many thousands to the drill company that is fortunate enough to secure their business.

Now, as regards that Sudbury Business - From your letter I take it that you wish direct statements. Following my usual practice I am going to be perfectly frank about the matter. The main reason for our losing Canadian Copper business was simply due to poor service, by this I mean the poor quality and workmanship on our No. 18 Leyners and the delay in supplying them with spares for same. The consequence is that at the present time we are most unpopular at both Creighton and Copper Cliff. They had worked themselves into such a state of mind that when the Sullivan came around with their DR-6 they simply embraced it, purchased 100 of them and now take the stand that they will show us that they need not be dependent upon us for their drilling requirements.

Naturally, Creighton using this quantity of competitors machines exerts a tremendous leverage on the surrounding mines and just between ourselves this DR-6 is just about right for Sudbury rock.

I have thought a good deal about this Sudbury business and although there are months and months of ceaseless plugging ahead of us, still I feel positive that if yourself and the factory will back us up we can win back the business. Please be assured that this will be no child's play Ingersoll-Rand in Canada, at last, have never been a factor in the stoping or hammer drill game. We have always run third, Waugh coming first, Sullivan second and ourselves third. When we brought out the No. 18 we had a world beater, but it was no time before Waugh brought out their No. 60, which trimmed us, then Sullivan came out with their DR-6 which was better yet and then all the mine managers took up the same old chorus, viz, that we never were builders of hammer drills. Unfortunately, we sat back owing to advices from New York that both the Sullivan and Waugh machines would go to pieces and that we would reign supreme, but we are still sitting back.

Along comes the No. 248, but one could see at a glance that it would not stand up to hard rock. Then along comes the CC-21 stoper to which the same remarks apply. Then the BCR-430 Jackhammers is out-classed by two competitive machines, so you see what we are up against.

We made a real drill out of the No. 43 at Sherbrooke and can beat anything hands down that comes over from across the line and I am positive that if we all get together we can do the very same thing with water drills, stopers and plugger drills. Sherbrooke can turn out every bit as good work as Philippsburg, their handening at the present time is "par excellence" and there is no reason why we cannot develop at Sherbrooke and produce drills which are perfectly suited to a country which as a whole comprises very hard rock, high air pressure and wet air. If we do not do something along these lines shortly, the conditions at present existing in Sudbury will obtain in most of the districts throughout this Dominion.

Mining in this Province is developing at a rapid rate. In Sudbury you have the largest deposit of it's kind in the world. With millions of pounds proven up but yet untouched. Porcupine is producing over \$7,000,000 per year in gold right now with only three real properties working. Down right near Toronto there is all sorts of limestone to the West. To the East of this city there are many molybdenum properties, which are being proven up. This whole province is one vast treasure-house of mineral which will call for many many rock drills - the class of business we desire.

What I would like to see would be the establishment of a Mining Dept in this office with jurisdiction over Timmins, Cobalt, Sudbury and all mining that comes in Toronto District. I firmly believe this is the only way to get results. If I were to look after this business for you, I could spend a week in the north every month, then a week in Sudbury every month then cover the balance of the district around here and by living in the City here I could be in touch with the headquarters of most of the northern mining companies and also meet the different managers and superintendents from these mines, who always make Toronto their objective. I feel so positive that an arrangements of this sort would prove beneficial from the company's standpoint that I would be willing to relinquish my present title of "District Manager" and work with Mr. Bowman in order to try and get you the results you desire.

I have Lyons along to the point where he is a pretty good man

A.A.B.

S.W.S to
Bourne
engineer in
product

-2-

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to be for us to get the business. I will confess that in every one of these cases you did get the business, and if it gives you any comfort to go into the deal feeling that your chances of winning out are so small, why go right ahead.

To me, it would prove such a damper that I would never be more than half-hearted in making out the case for our product.

I have got ingrained in me, right to the marrow of my bones, such a feeling of superiority of INGERSOLL-RAND product over that of any other make, that it is nothing short of incomprehensible to me how any intelligent buyer could seriously consider the purchase of any other make of machine.

Apparently we belong to different schools of thought on this salesmanship game, and my feeling has always been that it was not good business to pay too serious attention to your competitors. I think it is alright to know in detail the construction of your competitors' machines as it helps to give you confidence in the superiority of your own machine, but there is a great deal of truth in the saying - "Every Knock is a Boost" and I have very studiously avoided anything in the nature of critical criticism of our competitors' machines, except where deliberately invited to make such comparisons by the intending purchaser. I do believe in making these comparisons by inference, that is, by laying great stress on what I conceive to be the points of superiority of our product over our competitors', without specifically naming the competitor's machine.

This peculiarity in your methods has struck me on a great many occasions of recent years, and I have seriously tried to

Ingersoll-Rand Machine

Page Three:

Mode of travel

I should'nt bother with such details but ought to be working on more important things still. Then I would answer that when I am filling in odd corners with these small things the more important jobs have been attended to and if I was'nt doing these small things the time might be wasted. Here we try to do the most important job first and so on down the line to the smaller details, which might just as well be done and done properly, if they do not interfere with more important work. We cleaned and fixed up two BC-21 drills and one CC-11 lately. We put thirty odd dollars repairs on one, \$75. on another and \$73. on the third. We might not have had these drills in commission today if we had refused to do this work when asked if we could repair them.

It occurs to me to mention that the Slocan Star compressor contract (16x16 RP2) was signed up in our office here at Nelson. The Florence Silver contract (20x18)(RP-2) was signed up in the writing room at the Hume Hotel, and so was the McCune contract for the 10x12 NF-1. The details of the sales of three Little Tugger hoists recently placed were all threshed out here in Nelson between the hotel and our office, proposals submitted in writing and these signed up and sent in to us later on, with the exception of the Florence hoist, which was signed up in our office.

When

I expect to do quite a bit of traveling around the district before snow flies again, as would like to get around to every mine within the next six or eight weeks. Many of them are difficult to get to but between walking and horse back one can get around fairly well. I am a good walker and a fair rider so that it is no hardship for me in the hills around here, indeed, it is more a pleasure, as I enjoy it, but I feel I must not neglect my other work to be

Telephone North 280

OFFICE OF THE
DIRECTOR GENERAL



IN YOUR REPLY
PLEASE REFER TO

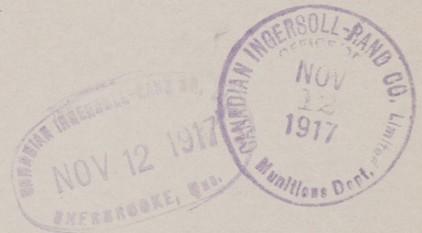
FILE NO _____

675 Yonge Street,
Toronto.

Ottawa November 10th 1917

Victory Loan
Winslow Personal

E. S. Winslow, Esq.,
Manager Munitions Dept.,
Canadian Ingersoll-Rand Company,
Sherbrooke, Quebec.



Dear Sir:

Your favour to the Finance Department, Ottawa, (forwarded on to me) in regard to the placing of War Saving Certificates among your employees has been held up as I expected being able to call on you in this connection and take the matter up with you personally.

The Honourable the Minister of Finance and the Victory Loan Committee have taken the view very strongly that this organisation can render highly important service in connection with the Victory Loan. The decision has therefore been arrived at to coordinate our forces until the Victory Loan subscription lists are closed, which will probably be about December 1st.

Above accounts for my not having been able to make the call anticipated. However, as soon as the Victory Loan work is over, I shall take the matter up with you again.

In the meantime I would like to express my appreciation for the keen interest taken by you in this important national work.

M/W

I am,
Yours faithfully,

E. S. Winslow

Victory Loan

and that so-and-so and so-and-so was feeling pretty talkative.

I understand you will have some speakers and doubtless there will be a note of patriotism and "help win the war". The food controllers advise us that we can all help very materially by eliminating waste and especially by conserving food grains. To that end, the use of wheat for making alcoholic liquors has been forbidden in Canada. Even if it were perfectly harmless, alcoholic liquor would represent a waste of food grains which should not be countenanced by patriotic Canadians. It is especially inconsistent to serve it at a supper where patriotic speeches will be given.

If neither the efficiency of the Company, the reputation of the Company, nor our duty as patriotic Canadians is sufficient to banish alcoholic liquors from this supper, we should at least be in the fashion. Prohibition is gaining ground the world over, and nearly every province in Canada has gone "dry". The fashion has been set in the highest quarters by His Majesty himself, in banishing alcoholic liquors from his table.

Yours truly,

H. V. Haight

HVH/KK

Mr. E. S. Winslow -

Attached list re proposed Banquet. Would suggest
having this on Saturday night, Oct 13th.

W. J. Inspectors

Shrapnel - Government Inspectors	16
High Explosive - Government Inspectors	22
Company Inspectors	4
Company Foremen	35
Guests	<u>6</u>
Total	83

GUESTS.

A. M. Sangster.	Chas. Sangster.
Robt. Newton	E. S. Winslow
A. E. Allen	W. Everson.

COMPANY FOREMEN.

Michie, Hall, Parsons, Wheeler, Jones, McLean,
Johnson, Le Barre, Mouldy, Jamieson, Cotter, Hansford,
Finnegan, Bishop, Armitage, Rogers, C.T. Ross, Garnet Ross,
Tom Mulinow, Darcy, Price, Demeury, Mennie, Thornton,
Bray, Simpson, Robertson, Capt. Baker, Homel, Wier, Emery,
St. Cyr, Williams, Lefebre, Fox.

COMPANY INSPECTORS.

Burbank, Briggs, Hewton, Doherty.

(FOR INTER-OFFICE USE ONLY)

**CANADIAN INGERSOLL-RAND CO.,
LIMITED**

SHERBROOKE, QUE. Oct. 11/17.

FILE No.

Winslow Permed

TO Mr. E. S. Winslow, - Mgr Munitions Dept.,
C I T Y.

SUBJECT

*Highlight
alcoholic
Beverages*

DEAR SIRS:

Dear Mr. Winslow:-

I beg to acknowledge with thanks your invitation to a supper at the Company's offices on Saturday night. Before accepting, however, I wish to protest against the proposal to serve alcoholic liquors at this supper.

It has been a rule of the Company that no employee shall bring any alcoholic liquor on the premises, and I believe it will be easier to enforce that rule if the staff set an example by observing it upon all occasions. Further, I believe it is recognised as tending to the highest efficiency that the Company's workmen should not use alcoholic liquor either during working hours or at any other time. I need not remind you that some of the railroads make this an absolute rule. I might, however, remind you that our Painted Post plant undertook a total abstinence campaign among their employees and that Mr. Parsons, at some personal inconvenience and for the sake of his example, became a total abstainer. I feel, therefore, that from the standpoint of the efficiency of the Company it would be a grave mistake to permit alcoholic liquors to be served at this supper.

As to the standing of the Company in the community, I am afraid that it will be distinctly lowered when word gets around town that liquor was served at a supper here on Saturday night

4-7
Standard Project

?

Shell
specification

October 18, 1917.

SPECIFICATIONS FOR COMMON STEEL SHELL.

The following specifications will govern in the machining, heat treatment and test of common steel shell.

1. MATERIAL:

The common steel shell will be machined and finished from forgings supplied by the Government as manufactured under current specifications for such material.

2. INSPECTION OF FORGINGS:

Upon receipt of the forgings, the manufacturer will make inspection for defective forgings. Should any be found defective at this time or at any stage of the manufacturing, they will be referred to the Inspector, who will decide whether or not the manufacture will be continued or whether such forgings will be laid aside to determine the responsibility for their defective condition.

3. HEAT TREATMENT:

In order to insure satisfactory control of the temperature, furnaces used in heat treatment of shell will be equipped with pyrometers satisfactory to the Inspector. The hardening of the shell in the heat treatment process will be accomplished by using a spray applied simultaneously to the inside and outside of the projectile. The arrangements for hardening and for the subsequent drawing of the shell must be satisfactory to the Inspector as insuring uniformity of product. In no case will a bath of molten lead be used in connection with the heat treatment.

After the shell are heat treated, the manufacturer will clean them thoroughly so as to free the inside surface from scale. Any means of cleaning satisfactory to the Inspector will be permitted. In case of pickling by sulphuric acid, the shell must subsequently pass through a bath of alkali and water to neutralize the acid and clean the shell.

4. HARDNESS TEST:

After completion of heat treatment each shell will be tested for hardness by the Brinell ball test method. The diameter of the ball to be used is 10 mm. The test will be made on the

body of the shell about 1/2" below the bourrelet. With a test pressure of 6,600 lbs. on the Brinell ball the diameter of indentation should fall between the limits of 3.4 mm. and 3.8 mm. Until the limits shall have become well established as the result of further experience small variations beyond these limits may be authorized by the Inspector, provided the shell meet the hydraulic test and are otherwise entirely acceptable.

5. HYDRAULIC TEST:

After finished machining and before banding, every shell will be subjected to an interior hydraulic pressure of the amount prescribed in the table embodied herein. This pressure must be held for at least 15 second. This test must disclose no leakage through the base or body of the shell and must not give a permanent enlargement beyond .001 per inch of caliber when measured on a diameter approximately 1/2" below the lower edge of the bourrelet. Shell showing porosity or giving undue expansion in hydraulic test will be so mutilated, destroyed or marked, in the presence of an Inspector, as to prevent the possibility of being resubmitted for acceptance as service projectiles.

<u>Caliber</u>	<u>Pressure lbs.</u> <u>per sq. in.</u>
75 mm.	18,500
4.7 "	14,300
5 "	14,100
6 " Mark II	12,750
155 mm.	13,500
8"	14,500
9.5"	10,000

6. REJECTED SHELL:

The machining contractor will reimburse the Government for the value of the forgings represented by shell rejected due to defects in heat treatment or machining operations for which he is responsible. The machining contractor will be reimbursed by the Government for the cost of work done on shell which are rejected due to defective material furnished by the Government, provided the requirements of Paragraph 11 have been satisfactorily complied with.

7. RINGING TEST:

11. GENERAL:

With a view to detecting possible cracks or flaws a ringing test will be made on every shell. For this test, the shell will be tapped with a small hammer on the nose, body and base. Any shell failing to give a clear ringing will be rejected. For the purpose of this test, the shell will be suspended by the band or by the nose. The test will be made in a suitable quiet place. It will be applied as late as possible in the manufacturing work, so as to detect cracks which might develop long after tempering.

8. BANDING:

12. GENERAL:

The copper band will be pressed into its seat in any manner which may be satisfactory to the Inspector. The seating of the band will be tested by tapping with a small hammer and by the occasional removal of a band for examination. The treatment to which bands are subjected must be such as to insure a tough, uniform condition for the finished band. This will be indicated by the ability of a removed band to withstand without cracking, being bent double and hammered flat.

Revised October 26th 1917.

9. SIZE OF LOTS:

Approved by order of the Chief of Ordnance.

The size of lots finished shell will vary from 1000 to 25,000 depending upon the caliber, the output and the stage of development of the work of manufacture. The exact size of the lot will in each case be determined by the Inspector.

10. INSPECTION:

Inspectors and other duly accredited representatives of the Government will have free entry at all times to all parts of the manufacturer's plant which concern the manufacture of the material ordered. The manufacturer will afford the Government representatives free of cost all reasonable facilities to satisfy them that the material is being furnished in accordance with these specifications. All the tests and inspections will be made at the place of manufacture prior to shipment, and will be so conducted as not to interfere unnecessarily with the operation of the plant. The manufacturer will provide within his plant a suitably furnished office for records, drawings, books, etc., to be used exclusively by the Government representatives.

11. GAUGES:

The manufacturer will provide all the gauges needed for the manufacture and inspection work except that the Government will in general provide the inspectors with a set of the inspection gauges and the corresponding set of master gauges covering the important dimensions to be gauged. These will be available for reference purposes but cannot be habitually used for inspection purposes. A satisfactory system of gauge inspection and checking must be maintained by the manufacturer.

12. PACKING:

When the shells are to be shipped to a loading plant the fuse hole will be closed with a transit plug to be provided by the Government. The shell will be coated inside and out with a suitable rust preventive, and will be packed for shipment in a box or crate which will be furnished by the Government.

Specifications dated Sept. 21, 1917.
Revised October 18th 1917.

Approved by order of the Chief of Ordnance.

SPECIFICATIONS FOR COMMON STEEL SHELL.

Approved September 21, 1917.

AMENDMENT No.1.

November 6, 1917.

Paragraph 3, HEAT TREATMENT:

Omit the sentence reading "The hardness of the shell, etc." Insert at the beginning of Paragraph 3 the following: "The current designs of common steel shell are in general such that steel having the physical qualities prescribed for Class "B" steel gives a satisfactory factor of safety as regards firing stresses. In view, however, of better fragmentation at the target, the Government prefers that shell be heat treated whenever the plant facilities are such that the output will not be materially decreased thereby. In submitting proposals, price and output should be specified for heat treated and for non-heat treated products. To be acceptable as non-heat treated type, forgings must meet the current requirements for Class "B" steel as prescribed in Specifications for Forgings for Common Steel Shell and Shrapnel Cases, last revised October 6, 1917, as amended November 5, 1917."

Paragraph 4, HARDNESS TEST:

Omit the first sentence and substitute therefor - "When shell are heat treated, provision will be made for testing by a suitable hardness test apparatus, preferably the Brinnel Machine, such numbers of shell as the inspector may consider necessary to insure uniformity of the product. This will in general call for the test of not to exceed 10% of the output." The remaining provisions of that Paragraph will apply as written.

Paragraph 5, HYDRAULIC TEST:

Omit Paragraph 5 as written and substitute the following: "There will be installed in each plant at least one hydraulic press and accessory apparatus, capable of testing projectiles up to a pressure of approximately 12,000 lbs. per sq.in. This will be utilized for testing doubtful shell and such small percentage of the general output as the inspector may indicate. This test will be at the pressure prescribed in the table given below and will be applied after finished machining, but before banding. The pressure must be held for at least 15 seconds. The test must disclose no leakage through the base or body of the shell and must not give a permanent enlargement beyond .001 per inch of caliber when measured on a diameter approximately $\frac{1}{8}$ " below the lower edge of the bourrelet.

Shell showing porosity or giving undue expansion in hydraulic test will be so mutilated, in the presence of the inspector, as to prevent the possibility of being resubmitted for acceptance as service projectiles. If the results of the tests of the limited numbers indicate a doubt as to the general quality of the lot of projectiles, the test may be extended as far as is necessary, in the judgment of the inspector, to remove that doubt, and eliminate all questionable shell.

<u>Caliber.</u>	<u>Test Pressure. (lbs. per square in.)</u>
75 M/M	10,000
4.7"	8,500
5"	8,000
6" Mark 1 (Howitzer)	7,000
6" Mark 11 (Gun)	10,000
155 M/M Mark 1	9,000
8" " I	8,500
9.5" " 1	10,000
10"	10,000

Approved by order of the Chief of Ordnance.

Sgd. E. P. Chern.

Lt. Col. Ordnance Department.

(FOR INTER-OFFICE USE ONLY)

**CANADIAN INGERSOLL-RAND CO.,
LIMITED**

MONTREAL, P.Q.

Winslow Personal
American shells

FILE No. Sherbrooke Personal.

October 26/17.

TO Mr. E. S. Winslow, Sherbrooke.

SUBJECT

Dear Mr. Winslow:-
DEAR SIR:

I hope that the bear hunt was a success and that no mishaps occurred. I hope that you are feeling the benefits of your outing.

I was very sorry to have you away this last week, it would seem as though the minute you got your back turned everything possible turned up. I was unwilling however to let your vacation be interfered with although a messenger could have been despatched for you.

I of course knew last week before you left that Mr. Doubleday was coming up to spend a day going over matters but I was afraid that if I told you you would want to put off your shoot. Mr. Doubleday spent Thursday in Sherbrooke and went into things pretty thoroughly. He took up with me in no uncertain terms the question of the quality of our product and the service we were giving our customers, but all we can do is be sorry for the past and promise very different conditions in the future under the new rules of inspection.

On Saturday noon about as you were driving out of Sherbrooke, Mr. Peterson telegraphed you to know how much additional six inch work we could take. I was able to answer him immediately and intelligently. I advised him that we could give him 300,000

Page 2.....

six inch shells by June 30th in place of 200,000 six inch shells by June 1st. He has written us to-day advising that we may expect to hear from him shortly.

On Monday Mr. Wood of the Munitions Board got me on the phone to try and find out where on earth you were so as to have you in Ottawa on Tuesday. He said that Sir Joseph Flavelle wanted to address Canadian shrapnel builders on the question of a large contract for American shells. I told Mr. Woods of your bear hunting expedition, and I told him that I personally was tied up with a previous engagement and could not go to Ottawa but that the Fairbanks Company would probably be there, and whatever they did we would do, that he could be guided by Mr. Brooks to represent us as well as the Fairbanks Company.

They had their meeting in Ottawa on Tuesday and it developed that there was some chance for the Canadian producer securing an order for a large quantity of 75mm shells for the American Government. As I understand it, American troops are going to fire the munition they supply themselves in French guns. The shell in question (drawings of which were laid on the table) was a funny affair, an unloaded shell of the H. E. type semi-finished internally semi-finished externally with a little brass base plate or re-inforcing plate. At the meeting in Ottawa Mr. McMath of the Canadian Bridge Company, Mr. Fuller of the Canadian Fairbanks, Mr. Woods of the Imperial Munitions Board and Col. Carnegie, Advisor, were appointed to keep an engagement with the American War Office Officials in Washington Thursday afternoon, the delegation being headed by Sir Charles Gordon who was already in Washington. It was assumed by this delegation that Sir Joseph Flavelle had good grounds for

Page 3.....

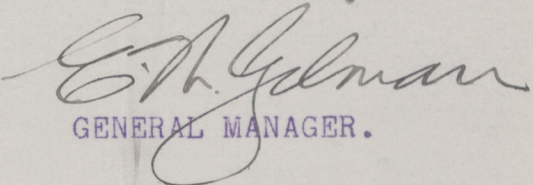
believing that this work could be secured. I saw the crowd here in Montreal Wednesday afternoon before they took the train for Washington and before I took the train for Sherbrooke. They were going down expecting to get between \$2.00 or \$2.50 for these shells. Four or five of the other manufacturers were going down to Washington unofficially to get first hand information.

On talking the matter over with Mr. Doubleday he was very sceptical of the whole proceeding. He did not think that the American Government would buy shells in Canada.

This is where the six inch and the 75 mm matter stands at present.

Yours truly,

EWG/OPT.


GENERAL MANAGER.

File Winslow Rand

Nov 21st 1917

Data of our connection
with Shell Manufacture
as sent to Wilfred Campbell
Historian, T.M.B.

Canadian INGERSOLL-RAND COMPANY Limited

Were at original meeting of mfg's and Militia Dept Sept 2/14.

- 18-Pr Shrap, 18-Pr H.E., 8"

How., 6" How., commencing 75 m/m for U.S. Gov't.

E.W.Gilman, General Manager. H.V.Haight, Chief Engineer.

A.M.Sangster, Works Manager.

E.S.Winslow, Manager Munitions Department.

Producing 6-inch Howitzer.

Mr. Winslow visited Master General of Ordnance and Minister of Militia; stated that shell manufacture could be undertaken to advantage by manufacturers; visited Dominion Arsenal; was present at original meeting of manufacturers and Militia Dep't Sept 2nd, 1914 and suggested formation of Shell Committee, nominated General Sir Alex (then Col) Bertram as Chairman, which was immediately approved by Minister of Militia; accepted order for 15,000 18-Pr Shrapnel shells. The Company started early, and became one of the three largest machiners of shrapnel.

(FOR INTER-OFFICE USE ONLY)

CANADIAN INGERSOLL-RAND CO.,
LIMITED

SHERBROOKE, QUE. 22nd November 1917.

Montreal Personal.
FILE No.

TO Montreal Office, Mr. Campbell

SUBJECT

E. W. S.
Appointment of
Assistant
Gen. Manager



DEAR SIRS :

Please note that E.S. Winslow has been appointed "Assistant to General Manager". Mr. Winslow's Headquarters will be in Sherbrooke; he will, as at present, have general jurisdiction over the Munitions Department and the Inspection Department, and in addition will fulfill such duties as may be appointed to him by the General Manager.

Ultimately it will be our intention to have the General Manager's Office in Sherbrooke open all the year around and communications addressed to that Department will be attended to by the General Manager's Assistant in his absence.

I bespeak for Mr. Winslow your party co-operation.

Yours truly,

GENERAL MANAGER.

EWG/EPS.

(FOR INTER-OFFICE USE ONLY)

**CANADIAN INGERSOLL-RAND CO.,
LIMITED**

SHERBROOKE, QUE. 22nd November 1917.

Montreal Personal.
FILE No.

TO Montreal Office, Mr. Campbell.

SUBJECT

E.W. S. Winslow appointed as Assistant Gen Manager



DEAR SIRs :

Please note that E.S. Winslow has been appointed "Assistant to General Manager". Mr. Winslow's Headquarters will be in Sherbrooke; he will, as at present, have general jurisdiction over the Munitions Department and the Inspection Department, and in addition will fulfill such duties as may be appointed to him by the General Manager.

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Yours truly,

EWG/EPS.

GENERAL MANAGER.

CANADIAN INGERSOLL-RAND COMPANY LIMITED.

SHERBROOKE, QUE.

COPY TO.....

*File
Winslow Personal*

23rd November 1917.

Imperial Munitions Board,
Wilfred Campbell Esq., Historian,
OTTAWA, Ont.

Dear Sir:-

In reply to your letter of November 15th we attach "Information Sheet" in connection with the production of Munitions in Canada filled out as requested except that we are not able to mail you at present photographs of the officers of the plant, or of the plant itself. In addition to the "Information Sheet" the following description of our early connection with shell work might be interesting to you. - -

Aug 4/14 (Tuesday)	War declared between Great Britian and Germany.
Aug 27 (Thursday)	Telephone message from Works Manager, Mr.A.M.Sangster to General Sales Department, Montreal advising that we were faced with a shut-down, and asking if we could not obtain an order from the Government to manufacture shells. Mr. E.S.Winslow was immediately sent to Ottawa to look into the matter.
Aug 28 (Friday)	Called on Col. Benson, Master General of Ordnance, found that order for 100,000



IMPERIAL MUNITIONS BOARD
OTTAWA

*
History of
Shell making
v. 9

IN REPLYING PLEASE REFER

TO

November 26th, 1917.

Winslow Personnel

Dear Sir,-

I thank you very much for the very fine statement you have sent me of the history of your plant, and its connection with the whole Shell Committee and the early work in munitions. This is one of the best bits of information regarding the early days of munitions work in Canada, which I have received outside of the regular minutes and correspondence of the Committee.

Your firm has certainly done its part. I will look forward with interest to the arrival of the photographs of the Officers of your plant and of the plant itself.

Again thanking you, believe me,

Yours sincerely,

Wilfred Campbell.

WC/RD.

HISTORIAN, IMPERIAL MUNITIONS BOARD.

E. S. Winslow, Esq.,
Manager, Munitions Department,
C/o Ingersoll Rand Company,
Sherbrooke,
QUEBEC.



IMPERIAL MUNITIONS BOARD
OTTAWA

* V.G.
Historian
Shell making

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Wilfred Campbell.

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HISTORIAN, IMPERIAL MUNITIONS BOARD.

E. S. Winslow, Esq.,
Manager, Munitions Department,
C/o Ingersoll Rand Company,
Sherbrooke,
QUEBEC.

Largest output 8" April 26/17 - 1710

" " 18 Pdr Swamp Jan 10/17 - 7773

Largest days output
of both 8" + Swamp

1382 } April 17
6781 }
8163

High Explosive not in operation
at this time

————— 0 —————

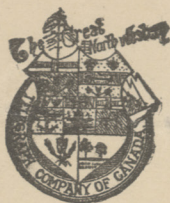
Largest output 18 Pdr H.E.
Sept-14/17 - 3174

8" finished + Swampnel practically
finished at this time

Jan/17 2,155

April/17 2275

Sept/17 1306



The Great North Western Telegraph Company of Canada.

CABLE SERVICE TO ALL THE WORLD.

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Z. A. LASH, President.

HEAD OFFICE: TORONTO.

GEO. D. PERRY, General Manager.

Aug 15 4 PM 17

From Montreal Aug 15 - 14

To S Winslow New Beach &

Important business your territory has

developed want you Montreal first

train will arrange continue

Your holiday later

Canadian Ingersoll Rand Co

CANADIAN INGERSOLL-RAND COMPANY LIMITED.

SHERBROOKE, QUE.

COPY TO.....

23rd November 1917.

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Aug 28 (Friday)

Called on Col. Benson, Master General
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*Col
 Inquired Please Note and
 return to Winslow Street
 Montreal*

*File Winslow
 Personnel*

18-Pr Shrapnel shells had just been received. The only existing plant for the manufacture of these shells was the Dominion Arsenal, at Quebec, whose capacity was less than 100 shells per day. Our impression that we could imitate the work of the Dominion Arsenal was received with mild incredulity by the M.G.O. Nevertheless, we were successful in obtaining a letter of introduction from the M.G.O. to the Superintendent of the Dominion Arsenal requesting that we be given full information regarding the manufacture of 18-Pr shrapnel.

Aug 29 (Saturday) Made report to General Sales Department, Montreal.

Aug 31 (Monday) Mr.E.S.Winslow inspected the Dominion Arsenal, and brought to Sherbrooke a full set of 18-Pr drawings, together with the detailed costs of each operation.

Sept 1 (Tuesday) At a conference in Sherbrooke at which were present Mr.A.M.Sangster, Works Manager, Mr.H.V.Haight, Chief Engineer, Mr.S.R.Newton, Assistant Engineer, and Mr.E.S.Winslow, Sales Department, the decision was arrived at that we could make shells. A contract price was decided upon based on our being able to obtain materials at prices mentioned by Dominion Arsenal.

Sept 2 (Wednesday)

A very large list of manufacturers had been called to meet the Minister of Militia at 10 A.M., few of those present knew exactly the object of the meeting. After waiting until about nearly 4 o'clock in the afternoon we were ushered into the Office of the Minister of Militia, and Col Hughes read the cablegram inquiry for 100,000 18-Pr shrapnel shells. After a few further words from the Minister of Militia we were instructed to go up with Col Benson, M.G.O., to discuss the inquiry in detail. When the meeting commenced the general feeling of the manufacturers seemed to be that they had been called up to Ottawa on a wild goose chase. Everyone was tired and anxious to get away, no progress was being made, and there were more objections than suggestions in evidence. When the matter of price was mentioned, each suggested figure was a little higher than the last.

Finally Mr. Winslow moved, seconded by Mr. Goldie that a Shell Committee be formed to consist of three manufacturers to represent the manufacturers, and three military men to represent the Government. The idea being that the manufacturing

members would look into the practical work and the military men on the Committee would serve as a guarantee that the Government would be given fair treatment. A second motion was put by Mr. Winslow, seconded by Mr. Goldie that Col. Alex. Bertram should act as Chairman of the Committee. Col. Benson, M.G.O. was ex officio the military head of the Committee. Both the motions were passed unamiably and Col. Benson and Col. Bertram left the room to obtain the Minister of Militia's approval. ^{Before} The rest of the meeting had had time to collect their hats and raincoats ~~when~~ Col. Benson and Col. Bertram returned and reported that the proposal was acceptable to Col. Hughes.

One point that deserves special mention is that in agreeing after a little remonstrance to act as Chairman, a very important idea was immediately ^{advanced} explained to Mr. E. S. Winslow by Col. Bertram. On the spur of the moment Col. Bertram said, "Yes, we can get Gantly, of the Nova Scotia Steel and Coal Company to make us steel and forgings. We can get the General Electric Company to make parts - meaning copper and brass parts - and we can get yourselves, Goldie McCullough and our firm, and a lot more to do the machine work."

This idea and the carrying out of it whereby the Shell Committee dealt direct with the maker of each individual part had more to do with the remarkable progress made in shell manufacture in Canada than any other thing; in fact it would not have been feasible for more than about one dozen firms to have engaged in the manufacture of shells if the old system had been adopted of placing orders for the complete article. We believe this plan had never previously been used in any country. In any case, we heard some of the early British Official visitors expressing wonder that such a scheme could be carried out without such incessant friction as to make the thing unpractical. The feeling seemed to be that the parts would not go to-gether, that the shell would be rejected by the inspectors and that it would be difficult to place responsibility.

The Committee as we understood ^{it} at the close of the first meeting would consist of Col. Bertram, Chairman, who was especially qualified to look into the machining of the shell body. Col. Cantly of the Nova Scotia Steel and Coal Company to look into the matter of steel supply and forging manufacture, and Mr. Watts of the Canadian General Electric Company to look into the supply of the other components. Col. Benson, Col. Grenville-Harson, Chief Inspector and Col. Lafferty, Superintendent of the Quebec Arsenal.

At the original ^{meeting} there was present Mr. Edward Carnegie who stated that his brother Mr. David Carnegie was shortly coming to Canada to advise him in a consulting capacity in connection with a new plant. Mr. Edward Carnegie suggested that his brother knew about shells and he had no doubt that he would ^{gladly} ~~greatly~~ assist the Committee in any way he could. As is well known the Committee got in touch with Mr. David Carnegie whose presence and advice

as Ordnance Advisor gave both the Committee and the manufacturers confidence in going ahead ^{which} when they would not otherwise have had. The Committee quickly got to work and very shortly it was arranged that, as our share we should undertake an order for 10,000 shells which was later increased to 15,000 shells. We got our first few components, 25 or 50 at a time from the Dominion Arsenal. We issued our first order on the shop to manufacture shells on October 28th, 1914, we made our first shipment on December 23rd, 1914 and completed our first 100,000 shells June 22nd, 1915. Over 500,000 shells had been delivered on March 1916, over 1,000,000 by November 10th, 1916 and over 1,900,000 by October, 1917 when no more orders for shrapnel were available.

In addition to shrapnel we manufactured nearly 200,000 8-inch shells, a small quantity of 18-Pr H.E. Shells and are now starting on 6-inch Howitzer shells and 75 m/m shells for the American Government.

In all business relations the British War Office has been highly praised by both Canadian and American manufacturers for fair dealing. In comparison with British makers, Canadians have been at some disadvantage due to distance from Inspection Headquarters and in connection with H.E. Shells loaded in England these have got to be given special care to avoid rust to compare favourable with shells from British makers.

We hope that the above data may be useful in connection with the work you are doing.

Yours very truly,

ESW/EPS.

Manager Munitions Department.