

SESSIONAL PAPER No. 29a

MONCTON, January 7, 1907.

Hon. L. B. BRODEUR,  
Minister of Marine and Fisheries,  
Ottawa.

SIR,—We have recently learned of your offer to assist in obtaining the salary due us by your contractor, Mr. E. A. Wallberg (Steel Concrete Co.).

Until that information reached us, we were under the impression that you took no interest in the fate of the workmen, as we understood our troubles had been brought to your notice by Mr. Goffette, who received no reply from you, but simply your offer through the honourable the Minister of Labour. It seems strange that Mr. Légère did not give you better information in this matter, and that he seconded Mr. Wallberg so well in his bad action.

We were engaged by Mr. Wallberg and our engagement was confirmed by Mr. Goffette, the Superintendent, at the rate of \$4 per day and all our expenses. On our return from Cape Race my companion was paid at the rate of \$3 and myself at \$2.80. We protested and Mr. Goffette then told me I would get \$3, like my companion, and that we would be employed during the whole winter. I was asking \$3.30, and he told me he would support my request, but that I would certainly receive \$3. He insisted upon our accepting these conditions, and, on this understanding, we proceeded to Little Hope. We are now left on the street without work, and we cannot even get the \$3 which were promised us for the whole winter.

I think it is needless, sir, to describe any further our tribulations. The bad faith of your contractor has been clearly established by facts as well as by his own correspondence. We respectfully beg to submit our case for your consideration and hope you will take such action as will promptly procure payment of what is due us.

We beg to remain, sir, etc.,

JOS. JACQUET,  
L. FLORENCE.

January 21.—E. A. Wallberg (personally) writes B. H. F., as follows:—'In connection with the letter of your deputy, dated 18th inst., regarding claims of Messrs. Jacquet and Florence, we beg to advise that we arranged to meet them with their friends, Messrs. Dorais & Dorais here, and writer met Mr. Florence, while Jacquet is in Moncton with Goffette. We settled with Florence, as per copy of receipt herewith, and Dorais & Dorais advised that they would recommend the acceptance of Jacquet's account, which we paid to them, as per copy of receipt inclosed, so that we feel that these matters are fully disposed of. Florence was well disposed, but considered that he had been promised various things by Goffette, whom we feel is at the bottom of any misunderstanding with these other two men.

February 14.—Telegram, B. H. F. to E. A. Wallberg, Steel Con. Co.: Do you expect to be in Ottawa shortly? Wish to see you. ? ? ?

No reply on file.

*Wallberg asked to make arrangements for transporting materials for lighthouse towers.*

March 26.—B. H. F. to Steel Con. Co.: Will you be good enough to make immediate arrangements with the agent of this department at Quebec regarding the transport of men and materials that you will require for the completion of your contracts for concrete lighthouses in the Gulf of St. Lawrence, so that there will be no delay when the boats are leaving Quebec.

*Gregory's scathing criticism of management with regard to transport of Wallberg's materials.—Query: Who is responsible for it?*

April 29.—Gregory writes deputy: I have the honour to report that the agent of Mr. Wallberg, who is the contractor for the new concrete buildings at Métis, Matane

and Cape Magdalen, is here. He wants a special trip of the supply steamer to take down 80 yds. of broken stone and 500 bags of cement to Métis. It will take the supply steamer the best part of a full day, weather permitting, to reach Métis, and no one knows how many days it may take before a landing can be effected at Métis. If the weather is favourable, the landing can take place in a few hours; but if not favourable, the steamer may have to cross over to the other side and wait for suitable weather to land there. It will also take a whole day to get back. Therefore, the closest estimate that I can make of this one service is from 3 days upwards, at a cost of \$250 per day for the steamer. Will be simply an expenditure of from \$750 upwards to land the small quantity of supplies I mention. This will require to be repeated at Matane and Cape Magdalen. The whole of this service I do not believe can be managed at a less cost to the department, under most favourable conditions than \$3,000. I think I can get the whole of this work done by schooners for less than \$500. The reason the agent of Mr. Wallberg gives for wanting special trips of a steamer is that he will require to remove the scaffolding of one building, when finished, to where he is going to begin the next one. I do not believe that scaffolding cost over \$50, and it seems ridiculous to make special trips costing over \$700 each simply to save the cost of \$50 worth of scaffolding. Schooners are much handier to do this work at Matane and Cape Magdalen, as they can enter into the river and land the supplies in almost any weather; besides, we have no boat available. When I state that the service may cost \$3,000, this is the very closest calculation I can make, allowing no loss whatever for weather; but if the weather is not favourable, that amount would probably be more than doubled by the detention which would take place. The coal that we will burn on one trip will cost more than the three trips of a schooner. I consider it my duty to lay these facts before the department prior to incurring such heavy expenses, as schooners can do the work better than we can with our steamers, and very much cheaper. I am not aware what steamer the department will have available for this work under any circumstances.

*Work finished at Little Metis—But was said to be virtually finished last December when it was inspected.*

May 1, 1907.—P. E. Parent telegraphs B. H. F.: 'Wallberg through with work at Little Metis—now ready for Matane. Will I send his materials by schooner or await *Aranmore*. Any delay would be injurious to Wallberg. Also advise if illuminating apparatus can be put up immediately. Kelso here. Has nothing to do with it. Might be sent down. (Stamped, 'Refer to Mr. Stumbles.) Query.—What Stumbles have to do with it?'

*Wallberg Materials again.*

May 1, 1907.—B. H. F. telegraphs Parent: 'Cannot make special trips for Wallberg. If he cannot wait for regular trips must transport his own material.'

*If he cannot wait for Regular trips of Department Steamers must transport his own material.*

May 1, 1907.—Deputy writes Gregory.—Reply to yours April 29, with reference to the transport of material for the reinforced concrete towers being constructed by Wallberg, Mr. Parent has been advised to-day that the department will make no special arrangements to handle this material. It was distinctly understood that this would be done on regular trips of the department's steamers and no provision has been made for handling the material in any other manner. Owing to the enormous amount of construction work recommended by the lighthouse Board this season the utmost economy must be exercised in handling the work, and if necessary you will inform Wallberg's agent that if he cannot afford to wait for the first trip of one of the boats to the gulf he will have to arrange for his own transportation. (Initialled W. P.)

SESSIONAL PAPER No. 29a

## MEMORANDUM.

*What special motive produced this unusual bit of foresight?*

Ottawa, April 30.—Plans have been prepared for several reinforced concrete structures which are to be built during the coming season. This work to be satisfactory must be done by experienced men, and consequently, if let by tender, it must be distinctly understood that tenders will not be accepted unless sent in by parties who satisfy the department that they have the necessary facilities for doing first class work of this kind. On the other hand, if the department decides that the work is to be done by its own men, it will be necessary to effect an organization for this purpose. Several thoroughly experienced and competent foremen will have to be engaged. I should prefer having the work done by contract if possible. B. H. F. I approve of this, W. P. A. Approved, F. G. B. H. F. to note approval, W. P. A., 3/5/07.

*Wallberg applies for patent and on strength of it wants more business from the Department.*

May 17, 1907.—Wallberg, Prest. Steel Con. Co., writes Hon. W. Templeman, acting Minister: 'With reference to our conversation of yesterday in connection with the contracts of lighthouse towers in reinforced concrete, we beg to advise that we have applied for a patent on this construction which we expect to be issued in a few days, and request that you send us particulars of such new construction in this line as you may have in the near future. As we now have 5 of these towers under construction for your department, we are very anxious to secure others so as to keep our gangs busy, as we now have several of them thoroughly organized for this class of work. We are prepared to do work either on the Atlantic or Pacific coast and we can assure you that we will quote the lowest prices consistent with first class construction. We have talked the matter over with your acting chief engineer, Mr. B. H. Fraser, and we trust you will take the matter up with him and send us particulars of such new work as you may have. The Hon. Mr. Brodeur has given us contracts for 3 towers at various times recently without calling for other tenders as I have no doubt that he has found our prices quite reasonable. We trust you will be able to do likewise on other work.'

May 22, 1907.—Deputy writes in answer to above: 'In the event of any further tower of this kind being required your application will be considered. Initialled W. P. A.'

*Chief Engineer objects to Wallberg's patent.*

May 23, 1907.—C. Stanton for Deput, writes Commissioner of Patents: The chief engineer of this department is given to understand that an application is pending before you for the issue of a patent for reinforced concrete towers for lighthouses. I beg to advise you that this department has already built reinforced concrete lighthouse towers and would desire to be heard as to priority of invention before such patent is granted (initialled W. P. A.)

*Letter Missing.*

May 25, 1907.—B. H. F. telegraphs Wallberg, Moncton: 'Writing you Moncton re concrete towers.' Where is this letter?

*More Omissions.*

June 28, 1907.—W. P. A. telegraphs from Matane light, Quebec, to Deputy Minister Marine: 'Made satisfactory start. Remind Fraser no provision made for lantern anchor bolts, Metane tower and Madeline, concrete finished here next week. (Written on this, 'Immediate, Mr. Fraser, F. G.)'

June 29, 1907.—Assistant chief engineer writes Steel Con. Co.: I inclose herewith blue prints showing details of anchorage for lanterns for concrete towers. Please instruct your erectors to leave the necessary holes to receive the anchor bolts in question.

*Wallberg's Patent and Proposition to Department thereanent.*

July 9, 1907.—Wallberg writes Deputy: 'As you are aware the Steel Con. Co. Ltd., of which I am president has built several reinforced concrete lighthouse towers for your department. These towers are based on a design of my own and for which I am desirous of securing a patent. Application has been made, and I understand that it would be granted at an early date, but for the fact that your department has requested of the patent office that no such application be granted until you have been consulted. In order to protect the Department of Marine and Fisheries and on account of construction which it has given to my company in the past, I will undertake to carry out all work which is covered by this patent for the department for a fair contract price as may be fixed by consultation with the officers of the department and without charging anything extra for royalty. Should, however, the department decide to do such work themselves, I would, of course, expect the privileges of the Patent Act to be extended to me by allowing me such royalty as would properly be due to my interests in this matter. I will be pleased to consult with the officers of your department as to the amount of this royalty for each individual tower. I trust the above will meet with your approval and that consequently you will have no further objection to my patent application and that you will write the Commissioner of Patents accordingly. I am prepared to enter into an agreement covering the above arrangement to bind me and my heirs and assigns.

## MEMORANDUM.

*Wallberg's proposals find favour with the Department.*

Ottawa, July 12, 1907.—I have carefully read over Mr. Wallberg's letter in connection with his application for a patent for reinforced concrete towers. Mr. W. has shown me his application and I believe that he is entitled to any protection that will be granted him by the patent office in connection with his application. There is no doubt that the department should be protected in connection with this matter as well as Mr. W. and I am of opinion that his proposition does this fully, and I would be in favour of the department withdrawing any objection to his patent being granted on the understanding that he makes the agreement he refers to, binding himself, his heirs and assigns. I also consider that there should be a clause in the agreement that if the holder of the patent at any time refuses to carry out the work of construction the department will then have the right to do the work without the payment of any royalty. B. H. F. Approved F. G.

*Wallberg so informed.—What does Chief Engineer say to this?*

July 13, 1907.—Deputy F. G. writes E. A. Wallberg as follows: 'In reply to your letter of 9th inst relative to your application for a patent for concrete towers, I would say that the department is inclined to accept your proposition on receipt of agreement covering the points you mention, viz.: that you will carry out any work covered by your patent for the department at a fair price to be fixed by consultation with the officers of the department and that should yourself or the holder of the patent at any time refuse to carry out such work, the department will have the privilege of doing so as seems advisable without any royalty being charged, the department will withdraw any objection to this particular application being put through. It would probably be well for you to consult with the officers of this department as to the price of the towers and the allowance for royalty before the agreement is prepared. (Initialled B. H. F.)'

July 22, 1907.—Wallberg acknowledges receipt of cheque for \$4,000 on account of our contracts.

*Wallberg's men idle, wants more work from the department.*

July 23, 1907.—Wallberg writes to Deputy: We beg to advise you that we have a full gang of men experienced in construction of reinforced concrete lighthouse

SESSIONAL PAPER No. 29a

towers, and this gang has now finished the tower at Little Hope Island. We trust you have some other work which you want done this season on which we can place these men, otherwise we will have to disband the gang and if we do so we cannot secure a competent gang for this year. There is now just enough time to build one more tower in the east this year before cold weather, provided we can secure an order at once. We await your further orders.

Memorandum, July 24, B. H. F.

This Indenture, made the Twenty-third day of July, One thousand nine hundred and Seven:

Between Emil Andrew Wallberg, of the City and District of Montreal, in the Province of Quebec, Contractor, hereinafter called the Contractor,

Of the First Part ;

And His Majesty King Edward the Seventh, represented herein by the Minister of Marine and Fisheries of Canada,

Of the Second Part.

Whereas, the contractor is the inventor of a certain new and useful improvement in monolithic towers, and has made application to the Patent Office of the Dominion of Canada for a patent of the said invention.

And whereas, it is desired to use the said invention in work to be done by the Department of Marine and Fisheries:

Witnesseth, that in consideration of the premises and of the sum of one dollar (receipt whereof is hereby him acknowledged) the contractor covenants and agreed with His Majesty as follows:—

1. The contractor agrees to do and carry out for His Majesty all work which may have to be done in any part of the Dominion of Canada requiring the use of the said invention or in which the said invention can be advantageously employed for a fair contract price to be fixed by consultation between the contractor and the officers of the Department of Marine and Fisheries and without making any charge whatsoever except such as shall be agreed upon as aforesaid by way of royalty or in any other way for the use of the said invention.

2. The contractor further agrees that if at any time he is unable or unwilling, to carry out work offered to him on terms as aforesaid the Department of Marine and Fisheries of Canada may itself execute and carry out the said work and may use the said patented invention without making any payment by way of royalty for the said use of the said patented invention.

In witness whereof, the contractor has hereunto set his hand and seal, and these presents have been signed and sealed by the said minister and countersigned by the secretary of the Department of Marine and Fisheries of Canada on behalf of His Majesty.

E. A. WALLBERG.

Signed, Sealed and Delivered  
by the contractor in the  
presence of

CHAS. MURPHY.

Signed, Sealed and Delivered  
by the Minister and Secretary  
of the Department of Marine and  
Fisheries, in the presence of

July 24, 1907.—Memorandum by B. H. F., evidently called out by Wallberg letter asking for more work. (See copy attached.)

*Telegram, 14th February to Wallberg—Memo. re patent, 12th July, 1907.*

MEMORANDUM.

With reference to Mr. Wallberg's letter hereunder, I would say that in my opinion the only way in which we can be certain of having this work completed this season is to put the work in Mr. Wallberg's hands. The designs have been prepared and tenders could be asked for at once. Authority has already been given to accept tenders for this class of work only from contractors who have had previous experience in and can satisfy the department that they understand fully the method of doing first class reinforced concrete work. Each contractor has, to a certain extent, a method of his own, and no doubt would suggest modifications in the design to suit the particular plans or methods, all of which will involve consultation and tend to delay. When tenders were called for this class of work previously, there was very little response from the contractors. Mr. Wallberg was the only tenderer, and I believe that it would be to the advantage of the department to place the work in Mr. Wallberg's hands provided a satisfactory price can be arranged. The department has to send a lot of machinery to this station at an early date, and the material for the lighthouse could be taken at the same time. The lantern for this tower has been ordered and will be ready to erect by the time the tower is completed. The erection of the tower is included in the work proposed to be done during the present season and money has been provided to pay for the same.

B. H. F.

OTTAWA, July 24, 1907.

*Completion of Wallberg's Contracts.*

August 2, 1907.—Telegram, W. P. Anderson to P. E. Parent: Wallberg reports his contracts completed. Can you inspect buildings on return trip for payment certificates?

*Wallberg's patent.*

July 23, 1907.—Proposed agreement with the government offered by Wallberg providing for the use of his so-called invention in reinforced concrete work for the government. (See copy attached).

*B. H. F. endorses Wallberg's proposition.*

July 24, 1907.—Memorandum (in consequence) by B. H. F. again: I consider that the accompanying agreement protects the department, and as soon as it has been properly executed we can notify the patent department that under the circumstances we will offer no objection to Mr. Wallberg's application; at the same time, they should understand that we still desire to be consulted in connection with any further applications regarding the construction of lighthouses or other works usually undertaken by this department. (B. H. F.)

*Chief Engineer objects.*

Written across upper left hand corner: 'Col. Anderson to see this. (F. C.)'  
Written at foot: 'Why should the minister sign this? If Mr. Wallberg has invented anything he is entitled to his patent and his royalty without this; if not so entitled why should we be bound to deal with him. I advise the minister to refuse to sign.'  
W. P. A., 2/8/07.'

*Minister objects also.*

Written across lower right hand corner: 'I am of opinion that if Mr. Wallberg has anything that he has a right to patent that he should procure a patent there'

SESSIONAL PAPER No. 29a

and whenever the government want to use the arrangement patented that it pay like any private individual for use of same. No good purpose can be served by making this contract.—W. T.

August 8.—Wallberg notified in accordance with this last note.

*Patent Office wants further information re reinforced concrete towers.*

August 17, 1907.—Letter from W. J. Lynch, Patent Office, to deputy: 'Referring to your letter, May 23 last, to the Commissioner of Patents, I am directed by him to say to you that the examiner would like to be furnished with as full information as possible regarding the nature of reinforced concrete towers heretofore constructed by the Department of Marine and Fisheries. It is, of course, impossible to allow a broad claim for a reinforced tower, but in order to deal satisfactorily with specific claims it is desirable to know as fully as possible what has already been done.

*Department shows that Wallberg is not entitled to patent.*

August 24.—J. F. H., for deputy, writes chief clerk patent office: 'In reply to inquiries contained in your letter, 17th inst., I beg to forward herewith plans of four buildings which this department is erecting in reinforced concrete to show that this method of construction is not new with us. Moreover, I should like to explain, with reference to some reinforced concrete lighthouses built by Mr. W. for this department, that Mr. W. offered to supply his own plans because he claimed that it suited him better than working to plans which we were prepared to furnish, as we had announced to Mr. W. before he built any reinforced concrete towers for us that it was our intention to use that method of construction. You will please note that there is nothing new in buildings erected in reinforced concrete. I am not sure that lighthouses have been previously built in this style, but it has been used for mill chimneys and other high towers, and of course the principle involved is the same. In my opinion, if Mr. W.'s contention that a reinforced lighthouse is patentable, he would be equally entitled to take a patent for any other building similarly constructed. (Initialled on the side, W. P. A.)

*Payments made on Wallberg Contracts.*

August 30.—E. C. Warren, for Steel Con. Co., writes: 'Would like to arrange a settlement with you to cover our contracts for the construction of lighthouses at Little Metis, Matane and Cape Magdalen. We understand from Mr. B. H. F. that these have been inspected and found to be satisfactory.'

September 3.—Deputy writes Steel Con. Co., in reply to above, to send in immediately your account for this work. Payment will be promptly made on receipt of the accounts.

October 19.—Wallberg, for Steel Con. Co., writes inclosing accounts for Little Hope, Little Metis, Matane and Cape Magdalen. Little Hope paid in full, balance \$3,875. We also request estimate of about \$4,000 on Heath Point tower, contract for which amounts to over \$6,500. All materials for this work delivered and considerable portion of work performed.

*Little Hope Lighthouse Tower and Dwelling.*

May 17, 1906.—Memorandum by B. H. F. re Little Hope new tower: Arrangements have been made for the resident engineer at Halifax to supply information at the earliest possible moment to prepare plans for rebuilding this station. It will cost from \$10,000 to \$15,000 to build a new tower and dwelling and rebuild the breakwater.

The rebuilding of the the light is, of course, urgent, but no doubt the details will be approved by the Lighthouse Board before work is commenced. (This

7-8 EDWARD VII., A. 1908

light was destroyed by fire on April 19, 22/5/06.) (Await information from Halifax—W. P. A., 14/6/06.)

*Light for same.*

May 19.—Memo. for the minister: Light at Little Hope Island, N.S., has been burned, and it is necessary to erect a new tower and provide lighthouse apparatus for this station. The undersigned recommends a 3rd order small model quick flashing light (characteristic to be determined later) with a 7-ft. circular lantern, for which the sum of \$7,000 should be provided. The apparatus itself will cost, delivered in Montreal, about \$6,200, and the remainder of the amount is required for freight and erecting expenses. No signature, but initialled G. W.

July 2.—Long letter from Resident Engineer J. A. Légère to W. P. A., proposing plans for new lighthouse, dwelling, breakwater, repairs, &c., at Little Hope.

*Chief Engineer recommends certain work at Little Hope Island.*

August 1.—Memo. by W. P. A.: I recommend that repairs to the Hope Island breakwater be sanctioned at once, and be done by days' labour under Mr. Légère's supervision, at an estimated cost of \$3,000. I think possibly a good deal of this work might be done in concrete, so as to be permanent, just about as cheaply as cribwork. I think also that a little extra expenditure in groines and a little saving in facework might be an improvement. It will be seen from Mr. Légère's report that one or more of the groines already built have filled in. With regard to a tower I recommend the erection of a reinforced-concrete tower 50 feet high, and ask for permission to get tenders for such a building. I recommend the erection of a comfortable small dwelling which can be built by contract or days' labour, as Mr. Légère thinks best. Endorsements: 'This tower should be sufficiently high to utilize to advantage a 2nd order 9-ft. light.—J. F. F.' 'Money available.—B. H. F., A. W. O.' 'Authorized—F. G.'

*Instructions as to same.*

August 27.—Telegram, B. H. F. to J. A. Légère, Halifax: Proceed with repairs Little Hope breakwater. Plans being prepared for fireproof tower and dwelling. If necessary, small temporary shed for lightkeeper may be erected. Hope to call for tenders shortly.

August 23.—Letter from Légère to Chief Engineer, calling attention to the urgency of the work at Little Hope breakwater.

August 24.—Chief Engineer writes Parsons inclosing plans for a new dwelling for lightkeeper.

*Wallberg's tender for Little Hope Lighthouse tower.*

August 30.—E. A. Wallberg, for Steel Con. Co., writes B. H. F., quoting for a lighthouse tower for Little Hope island in reinforced concrete, \$4,950, 10 ft. 6 in. diameter and 75 ft. high, and will be built exactly similar to the other towers which we are constructing for you. We can begin the construction of this tower at once and complete it very promptly, and in order to do so we trust to have your acceptance at very earliest moment.

September 4.—E. A. Wallberg telegraphs B. H. F.: Expect go Halifax to arrange for gravel and materials for Little Hope to begin quickly. Can you confirm order. Wire Moncton.

*Cape Race tower.*

September 4.—B. H. F. replies: Will not recommend acceptance your offer till I have seen Cape Race tower. Can arrange purchase material which we will turn over to you as part of contract price should you get the work. If this is satisfactory, let me know.



## SESSIONAL PAPER No. 29a

*Resident Engineer, Halifax, suggests arrangements for Little Hope work.*

September 1.—J. H. Légère writes B. H. F.: I received your telegram stating that the work at Little Hope island might be done by Wallberg when through their work at Cape Race, and I have answered you that Wallberg's foreman at Cape Race had wired me that he would be through September 15. I would be very glad, of course, if you could arrange to go to Cape Race when the vessel goes there. I want the ship to take a load of materials to Little Hope Island about September 10, and then go to Cape Race on or about September 17. I am not certain whether I can arrange this but I will let you know as soon as possible.

September 5.—E. A. Wallberg telegraphs, from Moncton, B. H. F.: Arrangements your wire yesterday quite satisfactory. Saw Légère yesterday. Am certain about Cape Race. Writing.

*Wallberg explains his plans.*

September 22.—E. A. W., Steel Con. Co., writes: We inclose herewith blue print of Little Hope lighthouse tower as we propose to construct it as soon as you fully decide. We are sending on materials according to this plan. We understand that the foundation is gravel, so we have made an extended base with buttresses and this figures now ample for stability without any further anchorage. We would suggest, however, that the earth be banked up around base, about as we have shown, which will give a good appearance and shed the water away from the tower, at the same time bedding it into the gravel and give additional stability. We have figured on 50 lbs. wind pressure in every case, which is more than we will ever obtain. Gives other details, then closes. Please advise us as soon as possible about this and about the other three for which you have plans. Also please send us the sketch of the house at Port Colborne which you wished us to consider.

*Work not to be done this fall.*

September 28.—B. H. Fraser telegraphs Legere: 'Shall not build Little Hope tower this fall. Sending instructions re temporary lights.'

*Assistant Chief Engineer talks of Temporary Arrangements, but is apparently willing to let Wallberg decide.*

October 1.—Assistant Chief Engineer to Legere: 'Since writing you re temporary light at Little Hope island, I have been in consultation with Mr. Wallberg regarding the proposed design for the tower for that station. I was under the impression that owing to its height and small diameter that there would probably be a considerable vibration, in fact enough to interfere with the rotation of the illuminating apparatus and probably break the incandescent mantles. Mr. Wallberg, however, purposes entering into a contract with us under a guarantee that this will not occur and consequently if he desires, he may proceed with the erection of the tower this fall. Under the circumstances it will be well to let the matter of a temporary light rest, and if the tower is erected the light may be installed thereon in a temporary manner, using the 7 ft. lantern lately taken from Mauger Beach station and 6th order temporary light which will be furnished from Prospect. In case the construction of the tower is not proceeded with the lantern can be erected on a rough wooden trestle which may be boarded in if desirable and weighted down with ballast. The height should not be less than 20 feet. During the winter months it would be difficult to maintain a pole light so as to give a satisfactory service. I believe Mr. Wallberg's intention is to proceed immediately with the construction of the tower and I will advise you later as to this matter sending a copy of the accepted plan.

October 3.—Chief Engineer informs Legere that it will probably not be possible to have the new dwelling erected at Little Hope this season.

October 3.—B. H. F. telegraphs Wallberg: 'Send Legere 2 copies latest plan Little Hope, send 3 copies here for approval and attaching to contract. Send 2 copies each other 3 towers for same purpose.

*Wallberg gives Guarantee.*

October 1.—E. A. Wallberg writes B. H. F.: In reply to your wire regarding Little Hope tower, we hereby guarantee that there will be no breaking of mantles of your lights due to vibration of the tower and agree to make good any loss or defects due to such cause. We are pushing the work ahead as fast as possible.

*Wallberg Decides Matter.*

October 3.—Telegram from Legere to B. H. F.: Your telegram September 29 saying not to build Little Hope light is followed by one from Wallberg, October 1, saying building authorized by you. Kindly advise me whether this is so—have plans forwarded.

October 3.—B. H. F. replies: 'Writing you fully *re* Little Hope. Wallberg will send plans.

*Wallberg's Tender Accepted.*

September 17.—Minister writes Governor General in Council about Little Hope matter and recommends that Steel Concrete Co.'s offer to rebuild for \$4,920 be accepted. The company have just completed the erection of a similar tower at Cap Race, Newfoundland, and are preparing to erect 3 others in Quebec for which tenders were publicly invited and theirs was the only tender. The acceptance of their offer would seem to be the only way the work can be done without loss of time.

Contract dated September 27.

October 4.—Approved by committee of P. C.

*Temporary Light for Little Hope suggested by Noble.*

October 5.—W. H. Noble, Assistant Commissioner of Lights, writes from Prescott, J. F. F., Com. Lights, Ottawa: Have a memo. from B. H. F. Can you arrange temporary light for Little Hope island. I can put up the lantern taken down at Mauger's Beach on a temporary staging until a permanent tower is erected. If this is approved I beg to recommend that a 4th order lens of 36° with 25 m/m Diamond Chance light and stand by lamp be supplied. Stamped, File and return October 10, 1906. J. F. F. Stamped, Referred to Commissioner of Lights, October 11; same stamped October 20, and same stamp November 7.

*Wharfage Charge objected to by Wallberg.*

October 29.—E. A. Wallberg writes B. H. F. about a bill for \$5.20 from Rollins & Co., for wharfage for lumber in connection with Little Hope. As you are doing the transportation, material should have been delivered at your wharf and you could not arrange to receive it there you should bear this charge.

October 30.—B. H. F. replies, and hardly thinks the charge is a legitimate one against the department.

*Work to be put in hand immediately.*

November 2.—Chief Engineer writes Legere inclosing 2 copies foundation plan for new dwelling at Little Hope island. You may put this work in hand immediately. (Omitted, and sent with note on 7th. W. P. A.)

SESSIONAL PAPER No. 29a

*Plans wanted for Department.*

November 27, 1906.—Memorandum for Mr. B. H. Fraser by W. W. S.

Please supply us with 2 copies of the specifications and plans of the reinforced concrete tower to be erected at Little Hope island and also state when the tower is to be completed, as we require the information for the contract.—Endorsed, plans 18606 and 7 given Mr. Stumbles. 27/11/06 B. H. F. Completed before close of 1906.

*Trouble with Wallberg's Workmen.*

November 24.—Deputy writes Steel Con. Co.: This department is in receipt of a complaint from J. L. Goffette to the effect that he has not been paid wages due him by your company and further that you have men employed since October 2, last, on Little Hope island who have not been paid. If you are not prepared to settle with these men the department will have to refer the matter to the Department of Labour for settlement under the terms of your contracts.

*Agreement with Wallberg.*

November 27, 1906.—Deputy writes Steel Con. Co., inclosing articles agreement (in duplicate) for the construction of a reinforced concrete lighthouse tower at Little Hope island, and requests that he have the names of two good sureties placed in the bond and have it signed by them after you have signed and dated it.

*Inspector of Work.*

November 26.—J. A. Legere telegraphs Chief Engineer: 'Can I have our foreman John Morton remain at Little Hope island as inspector new concrete tower. Man is satisfactory to E. M. Farrell, M.P.P.'

November 27.—W. P. A. replies: You may keep Morton if satisfied he is competent insure good concrete.

*Wallberg stops work.*

December 11.—B. H. F. telegraphs Legere: 'Wallberg wishes stop work Little Hope, assuming full responsibility. Make effort remove his men to Halifax earliest possible moment save expense. Instruct foreman advise Wallberg amount required at Halifax to settle wages.'

*Men removed from Little Hope Island.*

December 14.—Legere replies: Took men from Little Hope yesterday and to Halifax this morning.

December 14.—Chief Engineer writes Legere: 'I have your telegram stating that the men were removed from Little Hope. Please advise me whether all work has been stopped there or if it was only Wallberg's men that were removed.'

*Workmen's Trouble.*

December 15.—Letter from Minister of Labour to Mr. Brodeur inclosing copy of letter from J. L. Goffette about his and other workers' wages being unpaid by the Steel Concrete Co. Calls his attention to the fact that he corresponded with him on this matter on the 21st November. (Letter stamped 'referred to chief engineer.')

December 20.—B. H. F. telegraphs Legere: 'Can you recommend any payment on account of construction Little Hope lighthouse?'

December 20.—Deputy writes Deputy Minister of Labour asking to be furnished with a list of the current wages paid in the vicinity of Little Hope island for masons, concrete workers and labourers.

*Wallberg Explains regarding his Trouble with Workmen.*

December 15.—Wallberg writes Deputy: We have your favour 24th ult. regarding complaint from Mr. Goffette that his wages have not been paid. He has been paid that we legitimately owe him. He is a trouble breeder and is making unfounded claim because he was discharged for insubordination. Since that time he has tried to cause trouble among our other men, but without any success. Regarding the 2 men at Little Hope, they have been paid regularly and are perfectly contented, but he wanted to send their money through him, which we refused to do. We pay all legitimate claims and wages without the slightest delay and we trust the above explanation is satisfactory. Any claim that Mr. Goffette may have he will have to take to the courts.

*Goffette (Wallberg's workman) writes Minister.*

December 18.—J. S. Goffette writes Mr. Brodeur and says: 'The men who have been working at Little Hope for nearly 3 months have quit work without being paid on Saturday and Sunday last in the streets of Halifax. Confirms his 3 letters of last month which have remained unanswered. Regret the stand you take in this question. I would willingly have accepted your arbitration in my difference with Wallberg your contractor. I hope you will come to some decision in this matter.

P.S.—I have just received a telegram from the workmen stating that they have not yet been paid.

*Wallberg invokes Assistance of Department (almost instructs it) to settle his differences with his Workmen.*

December 21.—Wallberg writes Department: 'I have a letter from Mr. Jacques together with bills which I inclose herewith. They each claim 668 hours at 30 cents or \$200.40. If this time figures up to the date when they landed in Halifax I will allow it and will also allow the 30 cents per hour, but I will not allow any time for hotel expenses after they reached Halifax.

Jacquette was not paid 30 cents an hour at Cape Race if the letters of Mr. Goffette are correct, but I will allow it now. Regarding their expenses I will allow Florence \$68.45 and Jacquette \$26, but before paying them I wish you would look them over and see that they have receipts covering these expenses, as they look very high. The state car fare Halifax and return \$24.60. I wish you would look into this particular item. I cannot understand that item at all. Jacquette was paid \$120 on account and I will allow \$80 for Florence to Belgium, which you will deduct. This will make a deduction of \$200 and the total wages and expenses figure up \$495.25. On the 18th inst. they were each paid \$25 on account as per receipts which Mr. Legere sent me and Legere allowed Jacquette \$10, so this will leave a balance of \$235.25. If you find their wages accounts and expenses accounts correct in such case you can pay this and take a receipt from each one, which receipts I attach hereto. In case you do not quite understand the matter you could pay them most of it and leave any items which are not clear until Mr. Legere returns, when he will understand perfectly. I want to get the matter settled. I do not consider their claims just as represented to me by Mr. Goffette, but I have decided to settle them. I have an account of Isaac Wagner, St. Catherines, N.S. board, \$49. Ask Jacquette if this has been paid or shall I pay it. Thank you for your trouble in this matter.

*Minister explains matter to Mr. Lemieux.*

December 22, 1906.—Mr. Brodeur writes Mr. Lemieux: 'I would say that it appears to me Mr. Goffette will have to take his case to the courts. He does not appear to be a workman. I doubt whether any of the workmen have a complaint against the company, as the work at Little Hope is apparently going on quite satisfactorily under the supervision of our resident engineer. I am quite sure we would have heard if there

## SESSIONAL PAPER No. 29a

workmen were having any trouble with the contractors. The work at Little Hope is being done by contract, and it is now about half completed, but no payments whatever have been made on account. I inclose herewith a copy of a letter from the Steel Concrete Company in connection with this matter.

*Condition of work at Little Hope Island.*

December 18, 1906.—Legere, Hal., writes B. H. F.: 'In reply yours 14th instant, asking whether all the work was closed at Little Hope Island, or only that part which is under contract, I beg to inform you that all the work has been closed for this season. It has been really unfit to do any work since the 1st December. The break-water has been repaired and I think the work has been well done. I will have the work on the new dwelling begun early in the spring.'

December 27, 1906.—Legere telegraphs B. H. F.: 'Little Hope tower about one-third completed. Some men have claims against contractor. Writing fully to-night from St. John.'

*Memorandum—Steel work for dwelling at Little Hope Island and other materials to be provided for.*

December 29, 1906.—The Department is erecting a steel and concrete keeper's dwelling at Little Hope Island. The foundations are being put in by the resident engineer at Halifax. The steel frame of the building should be ordered now so as to be ready for the spring. It should cost in the vicinity of \$800, and I would recommend that offers be got from several Nova Scotia firms for providing the steel work ready to be erected on the foundation. I would also recommend that a price be got from the Expanded Metal Company of Toronto, for covering in this building and erecting the partitions, as was done so satisfactorily in the case of Lake St. Peter lighthouses. (Initialled B. H. F. I concur, W. P. A.)

'The work as a whole has been approved and the money provided.'—B.H.F. I recommend C. S. 3-1-'07. L.P.B.

*Resident Engineer explains the difficulties encountered in carrying out the work and its present condition.*

December 27, 1906.—Legere from St. John, N.B., writes B.H.F.: 'Your telegram received some days ago asking how much I would recommend to be paid for work done to Little Hope lighthouse tower. I now beg to report:—When it was decided to proceed with the work at Little Hope, there were none of our steamers available to transport the men and materials for the contractor from Halifax to Little Hope, so, as agreed between Mr. Wallberg and ourselves, I chartered a schooner to transport the men, materials, &c., for a certain sum, and expected that everything would be landed in a week's time, but instead of that the very bad wind storms of the last fall delayed the landing for over 20 days. The schooner had to put in Liverpool for shelter. I was away from Halifax at the time, and had Mr. Murphy go down to try and have the men at least taken over on a steamer. Mr. Murphy advised me that they would not go without their materials, which of course it was impossible to land. Having landed at last they were delayed occasionally for lack of gravel which they had not ready for us, and which at times it was difficult to take over. They have now the tower built some 20 feet above the ground and the foundations 6 feet below the ground level to hard clay bottom. I consider that from one-third to two-fifths of the work has been performed, and seems to have been well done—some of it of course will need retouching. All the cement they have used was taken from our own stock, which I had taken to the Island, as well as the sand, on a previous trip of one of our steamers. Counts of the materials from our stock which they are using is being kept, and was to be deducted from the amount due the contractor. The two men representing the contractor have some misunderstanding with Mr. Wallberg regarding their wages,

7-8 EDWARD VII., A. '908

expenses, &c., and I think it would be well for Mr. Wallberg to settle with these men before the department pays anything on account. I understand they are taking the matter into the courts—at least they informed me they were to do so. I will talk the matter over with the chief engineer when he comes down, which I understand will be shortly.

*Memorandum—Dictated by B. H. Fraser—Regarding payment on account of work—Difficulty with workmen to be first settled.*

January 14, 1907.—Mr. Wallberg called at the office some time ago to see if he could not receive payment on account of the work done at Little Hope. I would recommend that he be written to and informed that the resident engineer recommends that no payments be made until he has settled with his representatives, whom it appears have a grievance. Mr. Wallberg has not been altogether open with the department in connection with this matter, and possibly it might be as well to notify the Department of Labour that Mr. Goffette's charges have been to a certain degree substantiated. (Initialled, W. P. A.—Approved, F. G. Mr. Stumbles, 15-1-'07. See correspondence on steel concrete file. We are now awaiting an explanation from Mr. Wallberg.—B. H. F.)

*Memorandum for Mr. Noble. Change in Little Hope light.—Query; who discovered the reason for this and who was responsible for the original costly blunder?*

February 2, 1907.—I understand there is to be some change in the lantern and apparatus for Little Hope lighthouse. I should be glad to have full particulars as to weight and dimensions so that the top of the tower can be finished off to suit. There will be no trouble in doing this if we are advised at once. The height of the present tower is designed for a 2nd order light. If a lower order is to be installed the tower need not be so high, and this will be an advantage.—B.H.F. (W.P.A., 20-3-'07; also W.H.N., 2-2-'07).

February 23, 1907.—B.H.F. telegraphs from Halifax to W. H. Noble, Ottawa: 'Try delay any action Little Hope tower till my return next week.' (No action.—W.H.N., 22-2-'07). G., 1-3-'07; W.N.

March 2, 1907.—Chief Engineer writes Steel Concrete Co. with reference to change of light at Little Hope tower. Wants an offer from the company for (cost) change.

March 21, 1907.—Wallberg writes Chief Engineer: 'We beg to quote you for alterations in the reinforced concrete lighthouse tower at Little Hope Island, for which we have contract, the sum of \$2,300. These alterations will be shown on our blue print No. 80, herewith.—W.P.A., 22-3-'07.

*Memorandum (B.H.F.).—Department agrees to alterations and to Wallberg's tender for them.*

I have gone carefully into the offer of the Steel Concrete Co. for making the necessary changes in the Little Hope tower, to enable it to carry a 2nd order lantern and apparatus, and if the change is to be made, I consider that their offer should be accepted, as it is reasonable for the work that has to be done. It will be necessary to take down a portion of the tower and make first-class connection at the head of the present buttresses. This should be done under the most careful supervision. The tower will be practically doubled in strength towards the top, and very much stiffened. (Initialled, B. H. F.; I concur; W. P. A., 2-4-'07; for Minister's approval, F. G., L. P. B.)

*Resident Engineer at Halifax suggests names of tenderers for steel work for Little Hope Island dwelling.*

March 27, 1907.—J. A. Legere, Halifax, to B.H.F., assistant chief engineer: 'With reference to the new steel dwelling to be erected at Little Hope Island, I beg

## SESSIONAL PAPER No. 29a

to submit the following names of firms of Nova Scotia from which I think tenders might be asked: Robb Eng. Co., Amherst; J. Matheson & Co., N.G.; N. S. Steel Works, N. G.; Fraser Bros., N. G.; The New Burrill Johnson Co., Yarmouth, N.S.; Iron Fdry Co., Dartmouth; Ferguson & Co., Halifax. If I have omitted any you might please advise me of same, or also whether some of the names submitted should not be asked to tender. If it is the wish of the department that some of the firms in New Brunswick should be asked, kindly advise me as to whom they are.' Stamped; referred to chief engineer.

March 20, 1907.—Expanded Metal and F. P. Co., Toronto, write B. H. F., K. E. Hotel, Tor.: 'Quoting prices on material required in erection of dwelling at Little Hope Island, according to blue print submitted to us; total, \$406. Will provide foreman at \$5 a day and expenses. (Initialed, B.H.F., W.P.A., 5-4-'07.)

April 8, 1907.—Chief Engineer to Steel Concrete Co.: Advises acceptance of their offer and asks for date of completion of tower.

April 10, 1907.—Chief Engineer to Expanded Metal F. P. Co.: 'I find that your price is much higher than that quoted by your local agent in Ottawa. I should be glad to hear from you immediately as to whether there is not some mistake in your quotation.

*Memorandum (B.H.F.).—One thousand dollars payment to Wallberg recommended.*

April 10.—The Steel Con. Co., Montreal, is erecting a concrete tower at Little Hope light station for the contract price of \$4,950. The resident engineer reports that from one-third to two-fifths of the tower is completed, and I would recommend that an advance of \$1,000 be paid on account of this work, out of the vote 1906-7. Money available, B. H. F.—A. W. O. Pay, W. P. A., 11-4-'07. Paid April 11, '107. Q.

April 12, 1907.—E.M. and F.P.Co. to W.P.A., chief engineer: Your favour 10th instant to hand. We have looked up our estimate on materials for Little Hope Island. Offer to make no reduction in prices quoted, but explain that the articles are of the best, and they have to allow for sundry risks.

*Acknowledges letter 27th ulto. Gives resident engineer instructions about Little Hope Island dwelling.*

April 17, 1907.—From Chief Engineer to Legere: 'I have to instruct you to procure this (tenders for steel work) as soon as possible, locally, using your own judgment as to where to invite tenders. Time of delivery should be taken into account. I am making arrangements for shipment of metal lathing for walls and partitions for this dwelling, and shall be glad to know if you will require an expert for placing of the same. The walls of this building are to be lathed and plastered. I inclose herewith extract from a letter received from the Expanded Metal & F.P. Co., in connection with this matter. After referring to the usual method of doing the lathing &c., and giving other instructions, he says: 'I should think that with the assistance of the expert concrete man at work on the tower, you should be able to finish this building without the services of an expert from Toronto.

*Resident Engineer telegraphs to Department for plans 27 days after these had been accepted by them.*

April 16, 1907.—B.H.F. sends order to Expanded Metal & F. P. Co.: 'Stuff to be shipped to J. Parsons, agent, Halifax.' (Cost, \$276.82.)

April 22, 1907.—Chief Engineer writes Steel Con. Co. asking why no letter has been received in answer to our letter 8th April.

April 24, 1907.—Steel Con. Co. replies; apologises for oversight; expect to complete construction promptly; are sending our foreman off to-day. Thanking you for previous favours and trust that our tender for Heath Point lighthouse may be decided on favourably.'

*Plans sent.*

April 29, 1907.—J. A. Legere telegraphs to B. H. F.: 'Send altered plan Little Hope at once; also man to inspect work. Ship will leave Wednesday.'

B.H.F. replies: 'Enclose herewith plans of changes Little Hope tower; also detail of the connection between old and new work as explained to you while in Ottawa in accordance with my telegram to-day. Man here cannot get away inspect Little Hope use best local man available. Am mailing plans to-night. Shall send extra copy later.'

*With explanations.*

I also inclose sketch showing rearrangement of the floor beams and openings necessary for rope which drives clockwork. There should also be an opening in the room floor to allow this rope to pass through. The opening should be at or near the centre of tower so as to give a free fall of the weights inside the stairway. I communicated to-day with the Steel Concrete Co. in connection with the detail of the joint, and expect them to notify their man to-morrow to carry out arrangement shown on the inclosed sketch. It will be necessary of course for holes to be drilled through the stairs for the steel reinforcement to pass through, but it is not intended to cut the inside concrete work through the stairs. It should stop against them top and bottom.

*Company acknowledges receipt of these.*

April 30, 1907.—E. C. Warren, Steel Concrete Co. writes B. H. F.: 'Are you in receipt of your details showing arrangement of I-beams, &c., supporting platform of Little Hope lighthouse; also B. P. giving your method of bonding new work to old? We are advising our foreman, Mr. Jacquet, as to these details; also Mr. Wallberg who is at present in Moncton.'

(Query: Is this the same Jacquet who last fall had a row with Wallberg about his wages?)

*Department now sends Inspector.*

May 6, 1907.—B. H. F. to Legere, Halifax: 'Could send man now inspect connection old and new work Little Hope; advise me fully how he could reach station and return with least loss of time, giving date to leave here.'

May 6, 1907.—Legere replies: 'Leaving here Thursday. Man for Little Hope should come at once and to Halifax; advise me.'

May, 7, 1907.—B. H. F. to Legere, Halifax: 'DeMiffanis leaves this afternoon by C.P.R. Better meet him on arrival, Halifax.'

*Plans found to vary from Wallberg's.*

May 9, 1907.—Understand from DeMiffanis plans sent me, Little Hope tower not the ones to be used. Advise at once. Work begun as per your plans.

May 10, 1907.—B. H. F. replies: 'Prefer to use my plan, Wallberg prefers his. If he insists, the work to be done to satisfaction of DeMiffanis.'

*Memorandum for Commissioner of Lights.—New Light.*

April 10, 1907.—Can you furnish me with details of the openings required in the lantern floor of the Little Hope lighthouse tower?—B. H. F.

April 11, 1907.—Cable: Chanfeare-Smithwick, England: 'Send details of base second order lantern and apparatus Little Hope tower concrete.'

*Expanded Metal Company's goods received at Halifax.*

May 8, 1907.—Tremaine for Halifax agent writes deputy advising receipt of goods from Expanded M. and F. P. Co., Toronto, has to pay \$19.53 freight on them. Wants



SESSIONAL PAPER No. 29a

to know whether this should be paid by them or by the contractor. Stamped 'referred to chief engineer.' Letter to Expanded M. and F. P. Co., 14-5-07.—B. H. F.

*Freight disputed.*

May 13, 1907.—B. H. F. writes to Expanded M. and F. P. Co.: Referring to my letter 16th April, please advise me whether you have carried out shipping instructions given therein; that is in the matter of prepayment of freight and forwarding of invoices to Mr. Parsons with freight vouchers attached.

*Letter 17th April only received 10th May.*

May 10, 1907.—Legere writes P. H. F. acknowledging letter 17th April: 'Has just been received,' and I may say that I have already asked for tenders for steel work Little Hope this Saturday morning. The alterations of the tower are carried out hope to be able to place order soon. The materials from Toronto received and foreman to prepare foundation and cellar ready for superstructure.

*Resident Engineer details his arrangements.*

I have gone over the matter of the tower with DeMiffanis and he left this morning for Little Hope island. Plans from Mr. Wallberg to his foreman passed through here after foreman left and I had them forwarded to him. I did not open same as I thought they were simply a notice of ratification of plans sent me by you. However, if they are instructions to carry on work as Wallberg seems to wish, I have instructed DeMiffanis to make very sure that the work was performed satisfactorily. With reference to the necessity of having an expert sent from Toronto to complete the interior of dwelling, I think it will be possible for us to manage without this. I will advise you again as to this latter, and also as to the method of procedure of the tower.

May 15, 1907.—Expanded M. and F. P. Co. to B. H. F.—Your letter 13th. We have prepaid freight charges and forwarded invoices to Mr. Parsons.

*Inspector reports not very satisfactorily.*

May 11, 1907.—H. DeMiffanis writes: (No addressee given.) 'I have landed to Little Hope this Saturday morning. The alterations of the tower are carried out according to my plan, and ready for concrete. I believe that the boss misunderstood a telegram sent to him by Mr. Wallberg on May 3rd and telling him to proceed according to former instructions; but as the work is nearly completed and absolutely satisfying in the present way I have advised this man to continue the tower in accordance with my plan, and I think they will start at the new part in a few days. The old one is good; only some light defects in the concrete are to be fixed before completion. I have indicated them to the boss and will watch to their suppression.'

*Chief Engineer objects to unnecessary cost transporting broken stone—From Inspector's report.*

May 21, 1907.—Chief Engineer to Steel Concrete Co.: 'Am advised by Mr. DeMiffanis of this office that your men engaged in work at Little Hope are bringing broken stone from the mainland by private steamer, and with the intention of billing this department with the cost. We have no objection to landing the stone in one trip with our own boat, as we did at Cape Race, but we must absolutely refuse to pay any such charges as I understand are being incurred by these men at Little Hope. Mr. DeMiffanis states that it will cost at least \$1,000 to transport the stone to the station in the way it is being done now.'

*And reports same to Resident Engineer at Halifax.*

May 21, 1907.—Chief Engineer to Resident Engineer, Halifax: 'I inclose herewith copy of a letter sent to-day to the Steel Concrete Co. in connection with the

supply of broken stone at Little Hope light station. I find that some accounts have already been paid for carrying sand and gravel to this station, but they were marked "Ordered by Mr. Murphy," and certified by yourself, so it was presumed that they were in connection with the work on the breakwater and not that being done by the Steel Concrete Co.'

*Supplementary agreement now signed.*

May 23, 1907.—Deputy to Steel Concrete Co.: 'I herewith inclose supplementary agreement in duplicate, providing for the changes in the reinforced concrete lighthouse tower at Little Hope island, and have to request you to sign both copies in presence of a witness.—(Initialled W. W. S.)

May 25, 1907.—Deputy sends copy to agent M. and F., Halifax; also incloses copy of blue print referred to.

*Plans of dwelling sent foreman.*

May 27, 1907.—Acting Chief Engineer to John Silver, foreman construction, Little Hope. At the request of Mr. DeMiffanis I inclose herewith copy of plan of dwelling to be erected, Little Hope, for your guidance in carrying on the work. You will notice that the location of the cistern trap has been changed, and this should be built with a curbing 2 or 3 inches high to keep dirt and water from getting into the tank. I have further to advise you that the bolt circle for the anchor bolts of the lantern is 10 feet 6½ inches in diameter. The bolts are——in diameter and are spaced at 16½-inch centres.

*Copy of same to resident Engineer, Halifax.*

May 27, 1907.—Acting Chief Engineer to Legere inclosing copy of above letter also an extra copy of the dwelling plan for Little Hope. A similar copy has been sent to the foreman there at the request of Mr. DeMiffanis so as to avoid delay; also copy of letter sent to-day to Steel Concrete Co.

*Rough work objected to.*

May 27, 1907.—Acting Chief Engineer to Steel Concrete Co.: 'I have report from Mr. DeMiffanis of this office with reference to the construction of the lighthouse tower at Little Hope. He states that the concrete is strong but exceedingly rough, and considers that the outside should receive a coat of cement wash when the work is complete. I would be glad to know if you would instruct this work to be done without extra cost.'

*Explanations re cost transporting broken stone.*

May 23, 1907.—E. C. Warren for Steel Concrete Co. to W. P. A., Chief Engineer: 'We are in receipt of your communication 21st inst., in which you mention that our men at Little Hope are not handling broken stone economically. We have sent your letter to Mr. Wallberg, who is at present in Moncton, and he will probably advise you from there.—No action—W. P. A., 30-5-07.'

May 27, 1907.—E. A. Wallberg, for Steel Concrete Co., from Moncton to W. P. A., Chief Engineer: 'Replying to your favour of 21st inst. re steamer used for gravel at Little Hope, I saw Mr. Legere on Friday last, and he advised that he had arranged for this steamer at favourable terms. I may advise that most of the gravel is now transported.—No action—W. P. A., 30-5-07.'

*Inclosure missing from letter—Resident Engineer, Halifax, explains his arrangements re stone, sand and gravel transportation.*

May 27, 1907.—J. A. Legere to Chief Engineer: 'Have your letter 21st inst. you are inclosing copy letter to Steel Concrete Co. with reference to broken stone'

## SESSIONAL PAPER No. 29a

and sand for work at Little Hope. Such copy was not inclosed, but I may say that I saw original, Mr. Wallberg having shown it me at Moncton. As you are aware we agreed to transport the materials, including sand and gravel to the station. This material is being supplied from Port Mouton and taken to the site by a steamer which was bargained for by us, as I found I could not get our own steamer to land these materials. The *Lady Laurier* is at present overworked by buoy work, and the *Aberdeen* has just came off from repairs and left for Cape Race, and in the meantime sand and gravel must be supplied. I made the best arrangement I could with the steamer transporting this sand and gravel, and pay them \$25 per trip from Port Mouton to Little Hope island, a distance of about 10 miles each way. I might possibly be able to charter schooner to take a load or so of sand and gravel, and this might be done more cheaply than with the steamer. We have to carry besides the contractor's sand and gravel that for our own work at the new dwelling house being erected there.—Noted.—No action.—W.P.A., 30-5-07.

*Wallberg explains and minimizes roughness of work.*

June 7, 1907.—Extract from letter from E. A. Wallberg: 'In reply to your favour of 27th May I will put on the cement wash if you wish, and without charge, but a few hundred feet away the tower would look exactly the same. Your man is no doubt accustomed to plaster finished concrete work as done in Europe, but there is none of this done in America, as it is not considered good practice. The finish does not bind permanently with the body concrete. Please advise your wishes and I will arrange accordingly: 'Mr. DeMiffanis to consult with Mr. Fraser and advise me of decision, W. P. A., 13-6-07.'

*Steel for dwelling at Little Hope Island.*

June 25, 1907.—Legere to Chief Engineer: 'With reference to your letter 17th April instructing me to procure for the Little Hope dwelling the steel work required, I may say that I invited tenders from seven different parties but none were willing to tender except J. Matheson & Co., N.G. Their tender is \$800 for materials as per plan and specification, delivered f.o.b. on car with freight prepaid to Halifax. The amount of steel in this structure is about 15,500 lbs, which makes the cost per lb. a little over 5 cents. This is quite reasonable, and I have advised Messrs. Matheson that their tender is accepted. They cannot make delivery before 12 weeks, which will be some time in September. P.S.—We have to erect at the grounds, J. A. I.

*Tower finished.—Resident Engineer to report on it and on claim for extra Excavation.*

July 5.—Acting Chief Engineer to Resident Engineer, Halifax: I understand that the lighthouse tower at Little Hope has been completed. Will you be good enough to report on this at the earliest possible moment, stating if the work is satisfactory, so that the contractors may be paid. I understand also that, owing to the nature of the site, a considerable amount of excavation was required over and above that shown in the plan submitted and on which the tender was based. You will also report as to whether you consider any extra amount should be allowed for this work, and if so, what the amount should be.

*Steel for dwelling should be delivered earlier than twelve weeks.*

July 5.—Acting Chief Engineer to Resident Engineer, Halifax: Acknowledge receipt yours 26th re steel frame for Little Hope dwelling. I would suggest that you endeavour to get an earlier delivery of this material, if possible, as I hardly think the building will be fit to live in this winter, unless it can be erected and plastered during comparatively warm weather.

7-8 EDWARD VII., A. 1908

*Repetition of letter of 5th.—See above.*

July 11.—Acting Chief Engineer to Resident Engineer, Halifax: I understand that the lighthouse tower at Little Hope has now been completed, and should be glad to have your report on this matter, so that the contractor may be settled with, if the work has been satisfactorily done.

See letter of July 5—above.

*Foreman on dwelling foundation work reports on tower.*

July 9.—Frank Silver, foreman on dwelling foundation, and Inspector: 'I have to report that the steel concrete tower at Little Hope island was completed Thursday, July 4, and I must say that the work was done according to plans. The full complement of steel bars has been put in, as per plan, and also the connection with the old part of the tower built last season was well and strongly made, as shown on plans. As regards the cement and concrete, it has been well handled, and concrete was richly made. Sand and gravel was good and clean. I must say that the tower is perfectly plumb; the work I consider strongly built, but somewhat rough, especially underside of stairway. (Note.—Should like to see the original of this letter.)

*Resident Engineer also reports on tower.—Incloses copy foreman's report.—Some details to be finished.—Nothing extra should be allowed for extra excavation work.*

July 13.—J. A. L. to Chief Engineer: Beg to inform you that the steel concrete tower at Little Hope island was completed July 4, and that I had the men taken back to Halifax on Saturday, July 6. I made a personal inspection of this tower, and I found that the work seems well done and the concrete work strong-looking. The joint between the part built last year and the part made this year was well made and according to altered plans sent. The tower is very plumb, the string fastened to the centre point at the top hanging directly over the centre at the base in the inside of the tower. The shell is slightly lumpy in places, i.e., is not in a direct line but is done about as well, I think, as could possibly be done. The underside of the stairway is quite rough, however, and I think we should level it off with concrete. This would have been done by the contractors, only that they ran out of cement, and the delay which would have been occasioned by sending for more would have been considerable, and I did not think it wise to have them remain there. One man could fix this up in a few days—say 1 week—and about 3 barrels of cement ought to be sufficient to do the work. About \$30 ought to cover the whole cost of this work. The railing was very well placed, and it is satisfactory to me. I am inclosing copy of report received from my foreman and inspector at Little Hope island, in which he reports that the steel bars were all placed as shown and that the work was well and strongly built. The tower is now ready to receive the lantern, and I think that no danger will result if it is put on at once. Instructions should be given the erector to see me before he proceeds to the island, as I may be able to give him valuable information. In the case of the Cape Race tower, I was away when a man from England arrived, and I was not advised that he was there, so that he went to Cape Race without seeing me, and this occasioned great inconvenience, both to him and to myself. I am inclosing three views of this Little Hope tower, which I took at the time of my inspection. You will notice in one of them that the men are standing on the foundation which I have had built for a new dwelling which is to be erected there. This work is very well done indeed. I may say that the cement used by the contractors was supplied by the department. They used 67 barrels last year, which cost us \$2.024 each, or \$135.67; and 123 barrels this year, which cost us \$2.15 per barrel, or \$264.45; making in all, for the cement, \$400.12. This, together with the \$30 which I estimate it will cost to fix the underside of the stairway, would make a total of \$430.12 to be deducted from the amount of contract due to the contractors.

P.S.—I do not think the contractor should be allowed any extra for depth of

SESSIONAL PAPER No. 29a

foundation, as I explained to him fully the nature of the soil before he took the contract, last year.

July 17.—Chief Engineer reports to above effect to Steel Con. Co.—End of file 20269.

File 21084.

*Matane: Wallberg says foundation sand.—Chief Engineer objects to such contention. Memo. for Mr. B. H. Fraser.*

October 19, 1906.—Wallberg called me up on the phone to say that he had a report from Matane that the foundation was sand. I told him that we were aware that there was no rock there, but that the foundation was a good stiff soil, and that he would have to make his tower foundation sufficiently heavy to prevent either displacement or excessive vibration. W. P. A.

'Records—Get sufficient memos. on this file to show how work of building was initiated. W. P. A. 24/10/06.' Endorsed: 'Specification distinctly covers this. 22/10/06. B. H. F.'

*Parent explains why work at Matane was not inspected by him.*

Dec. 15.—P. E. Parent, R.E., Quebec: With reference to the new lighthouse under construction at Matane, I have the honour to inform you that nothing has been done there this fall, except the excavation for the foundation and the delivery of a certain quantity of construction materials. Therefore, I did not think it advisable to drive the 30 miles between Little Métis and Matane, owing to the very bad and stormy weather prevailing the day I was there. I may also state that if I have not visited Métis and Matane before the 12th inst., it is entirely due to the fact that the roads were reported absolutely impassable, either with winter or summer rigs. Besides this, it was necessary for me to be in Quebec to look after the men that returned from the straits, the last gang returning on the 9th inst.

*Wallberg wires department about sending tower materials to Matane.*

May 7, 1907.—E. A. Wallberg telegraphs from Moncton to department: 'Please arrange schooner transport our tower materials, Quebec to Matane. Whole month delay for steamer serious. Wire Moncton.' (Refd. to Cf. Eng. F. G.)

*Deputy replies.*

May 7.—Deputy to Wallberg: I beg to confirm my telegram of to-day: 'Our engineer went fully into matter transport material with Warren. He promised to make proposal. Will give same full consideration when received.'

File 28075.

*International Marine Signal Company purchase file.*

December 22, 1906.—Memo. to Clerk, P.C., January 14, 1907; approved by the Governor in Council, December 22, 1906.

On a report dated December 11, 1906, from the Minister of Marine and Fisheries, stating that he has had under consideration the recommendations of the Lighthouse Board of Canada, passed at a meeting held on October 17, 1906. The minister recommends, in order to carry out that portion of the improvements recommended relating to the establishment of gas buoys and gas beacons, that authority be given to him to purchase from the International Marine Signal Company, Limited, the following gas buoys and gas beacons for the localities mentioned below, viz.:-

14 gas buoys and beacons (8 buoys, 6 beacons), amounting to \$54,150.

3 x \$9,550, 2 x \$3,750, 3 x \$3,000, 6 x \$1,500 = \$54,150.

29a—14

December 26, 1906.—Extract from report of Committee, P.C., December 26, 1906.

On a memo., dated December 17, 1906, from the Minister of Marine and Fisheries, recommending that authority be granted to purchase from the International Marine Signal Company, Limited, the following gas and bell buoys, to be placed at the points indicated below:—

Yarmouth Harbour, combined gas and bell buoy, \$3,750.

Hantsport: Combined gas and bell buoy, \$3,750.

Eastern Point reef, Lunenburg: Combined gas and bell buoy, \$3,750.  
\$11,250.

January 10, 1907.—Deputy writes T. L. Willson, president International Marine Signal Company, Limited: 'I have to instruct you to ship to Captain Jas. Garbutt, agent of department at Victoria, B.C., marked for Middle Bank, Strait of Fuca

'One gas buoy, No. 11, with bell.

" for Sand Head, Fraser river.

" (spare one), for Sand Head, Fraser river.

" No. 8½, with bell, for Comox bar.

" No. 8½, with bell, for Ledger's reef, off McNeill point.

" No. 8½, with bell (spare one), for Ledger's reef, off McNeill point.

" No. 7½, for Boat point, Sarah island.

" No. 7½, for Zero rock, Rivers inlet.

" No. 7½, for West rock or Clark rock, Gulf of Georgia.

" No. 7½, for Fog rock, Fitzhugh sound.

" No. 7½, for Gibson reef, off Gibson.

" No. 7½, for Morning reef, Klewnugget.

'In all: 3 No. 11 gas buoys, with bells; 3 No. 8½ gas buoys (one with bell), and 9 No. 7½ gas beacons, No. 7½.'

SESSIONAL PAPER No. 29a

## BUOY SERVICE—T. L. WILLSON, INTERNATIONAL MARINE SIGNAL CO.

*Willson tender's for buoys.*

October 5, 1904.—Willson tenders for aut. gas buoys, with understanding that materials necessary to import shall be free of duty: No. 5, 5 ft. 9 in., \$2,000; No. 7, 7 ft. 3 in., \$3,000; No. 9, 8 ft 10 in., \$5,000.

August 6, 1904.—Willson writes deputy that he has under construction three gas buoys, and offering them for test and report.

*J. F. F. has instructions to test buoys.*

August 12, 1904.—Deputy acknowledges receipt of above letter 6th, and informs him that J. F. F. has instructions to take over these buoys, test same and report.

*C. of L. apparently doing Willson's work.*

September 27, 1904.—Commissioner of Lights writes to Powers & Co., boiler-makers, Ottawa (in absence of Willson) about bitumastic solution to apply to both interior and exterior of the gas buoys now being built for this department.

*Letter from English buoy manufacturer. He is turned down.*

September 30, 1904.—Letter received from James Thomson, president Engineering Works, Wolverhampton, Eng.; desirous of being put into communication with the Chief Engineer of Lighthouse Board, to bring before him specialties in the way of welded gas buoys.

October 2, 1904.—Memo. J. F. F. *re* above letter: 'As the Willson gas buoys have been tested he cannot see that the department will require any welded gas buoys, as those which Mr. Thomson desires to bring to the notice of this department.' This memo. is suggested by J. F. F. as a suitable reply to Mr. Thomson.

October 7, 1904.—Thomson was written to in these terms, and so squelched.

*Lengthy memorandum by J. F. F. and B. H. F. in favour of Willson's buoys.*

October 7, 1904.—J. F. F. writes a memorandum, B. H. F. apparently joining (four foolscap pages) on the merits of the Willson gas buoys, winding up with a recommendation to order from Willson 12 No. 5 buoys (\$24,000), 20 No. 7 buoys (\$60,000), and 10 combined gas and whistling buoys, No. 9 (\$50,000); total, \$134,000, exclusive of four buoys already on hand.

*Willson notified that test of his buoys was successful.*

October 7, 1904.—Deputy answers Willson that acetylene gas buoys have been successfully tested, and that acetylene has been adopted by the department as the illuminant for its gas buoys. (marked 'Concurred in, F. G., 8/10/04, and initialled R.P.)

*And that they would be used exclusively by the department. Orders \$148,000 worth.*

October 11, 1904.—Deputy writes Willson that J. F. F., who has tested the buoys, advises that they possess a number of advantages over the type previously in use, and that the automatic gas buoys be used exclusively by the department; and concludes by ordering 12 No. 5, 23 No. 7, and 11 No. 9—in all 46—cost \$148,000. Imported materials to be admitted free of duty.

7-8 EDWARD VII., A. 190

*Automatic buoy for Zephyr Rock, Straits of Northumberland.*

October 12, 1904.—Memo. by J. F. F.: That an automatic gas buoy should be provided for Zephyr Rock, Strait of Northumberland.

*C. of L. already improving new buoy by suggesting submarine bell attachment.*

January 3, 1905.—C. of L. writes Willson asking blue prints giving the dimensions and showing the water lines of the No. 7 buoy, as it may be possible to make arrangements with the Submarine Signal Co. to attach to these standard buoys their submarine bell device.

*A number of buoys already finished.*

February 7, 1905.—Willson informs deputy that a number of automatic buoys are finished, and asking shipping directions.

*Ship to Quebec and Prescott.*

February 20, 1905.—Deputy to Willson: Instructs him to ship his No. 7 gas buoys now ready, to Quebec agency in car lots. The No. 5's you will ship in car-load lots to agency at Prescott.

*Invoices for 504-514 11 buoys.*

March 2, 1905.—T. L. Willson writes he is inclosing invoices in triplicates for Nos. 504-514 inclusive, eleven automatic gas buoys.

*Minister wants all papers concerning Willson buoy business put before him. Willson probably ask for tenders under new law.*

May 12, 1905.—Memorandum for Deputy Minister (by Minister): Please place before me report to Council and all documents concerning the order for new apparatus to Willson. I will probably, after consulting with my colleagues, ask for tenders under the new law (initialled R.P.)

At foot of above: Report to Council prepared March 6, and original given to deputy minister. Copy filed in office of commissioner of lights—Signed, J. F. F.

*Prescott writes about charging cost of buoys which they have reshipped.*

May 9, 1905.—W. H. N., Asst. C. of L., to C. of L., re account of T. L. Willson asking if \$9,000 charged for buoys shipped to Lévis are to be charged to Quebec buoy service from this depot (Prescott) and the amount credited the advance of \$30,000 charged against this depot.

*C. of L. gives him instructions.*

May 18, 1905.—C. of L. to W. H. N.: 'Your letter, 9th inst., re gas buoys shipped to Lévis, I have to inform you that the buoys have been inspected and passed at Ottawa and the accounts certified here. The advance of \$30,000 charged against the Prescott depot should be charged to general account, and only those buoys which were actually used between Moncton and Kingston charged to Prescott. I have made memo. to this effect for Mr. Owen.

*Automatic Acetylene Gas Buoys and Beacons.*

1904.—In the fall of 1904 the acetylene gas buoy was taken up by the department after a test by the commissioner of lights, deemed to be entirely satisfactory. Immediately after the test that officer drew up a memorandum on the subject ending with recommendation to order from T. L. Willson, the manufacturer, twelve 5' 9" buoys at \$2,000 each (\$24,000) twenty 7' 3" buoys at \$3,000 each (\$60,000) and ten combin-



## SESSIONAL PAPER No. 29a

gas and whistling buoys \$5,000 each (\$50,000) in all \$134,000, exclusive of four buoys already on hand.

A few days afterwards an order was sent to Willson for a slightly larger amount, namely for \$148,000 to consist of 12 No. 5 buoys at \$2,000 each, \$24,000; 23 No. 7 buoys at \$3,000 each, \$69,000; 11 No. 9 buoys at \$5,000 each, \$55,000—\$148,000.

*No. 7 Buoys shipped Quebec, No. 5 Buoys to Prescott, in carload lots.*

1905.—In February Willson reported that a number of these buoys were completed and asking for shipping directions. On February 20 the deputy instructed him to ship the No. 7 buoys to J. U. Gregory, the Quebec agent, and the No. 5 buoys to the Dominion Lighthouse Depot, Prescott, all in carload lots, by C.P.R.

*Prescott to prepare 18 Connecting Tubes for No. 7 buoys for Quebec.*

February 22.—The commissioner of lights instructs his assistant at Prescott to prepare and hold in readiness for shipment 18 connecting tubes between buoy and lantern for No. 7 automatic gas buoys, with necessary valves and fittings. They will probably be required for Quebec agency.

*Instructions to Halifax about Painting Buoys.*

March 9.—The Commissioner of Lights writes to the Agent of the Department at Halifax: 'Referring to automatic buoys sent your agency, these have been covered with two coats bitumastic solution. If it is necessary to paint these buoys they should be covered first with a patent knotting varnish in order that the bitumastic solution may not discolour the red paint. A similar letter was written to the Quebec agent, and 13th March telegram sent to each agent on this subject.'

*Same to Quebec.*

March 13.—The Quebec agent replies by telegram to the Commissioner of Lights as follows: 'Captain Koenig in Ottawa. Explain buoy painting matter there.'

*Automatic Gas Buoys shipped by Willson to date.*

March 14.—Willson writes to Deputy: 'In accordance with verbal request from your department, I give you below a memo. of the automatic gas buoys, shipped to date to the order of your department August 22, 1904, September 30, and October 13, Nos. 501, No. 5, 502, No. 7, 503, No. 7 (3) delivered to Prescott; December 31, 1904, February 15, 1905. Nos. 504, No. 9, 507 No. 7, delivered to Halifax, February 21, 1905. No. 505, No. 5, stored. February 22, 1905. Nos. 506 (No. 7), 508 (No. 7) delivered to Halifax, February 25, 28, March 2, Nos. 509, 514 (No. 7) delivered to Quebec.'

March 31.—Nos. 515 and 516 No. 7 buoys were also shipped to Quebec.

April 5, 1905.—No. 7 buoys (3) Nos. 517-520, No. 7, inclusive were shipped to Quebec.

April 12, 1905.—No. 7 buoys (2) Nos. 521-523, No. 7, were shipped to Lévis as per instructions. Also one (without number) No. 7.

May 1, 1905.—No. 5 buoys (3)—No number—shipped to Port Arthur.

May 6, 1905.—No. 5 buoys (3) Nos. 530-2—shipped to Prescott.

May 9, 1905.—Prescott ships three gas buoys to Lévis.

May 13, 1905.—Three No. 5 buoys, Nos. 533-5-6 shipped to Prescott.

*Canadian Bank of Commerce manager informed that Department owes Willson \$99,000.*

May 15.—Deputy writes manager Canadian Bank of Commerce, Ottawa, as follows: 'This is to certify that the department owes to Thos. L. Willson on a contract

for gas buoys the sum of \$99,000 which sum will be paid as soon as appropriations available. The balance of the contract—\$10,000—will be payable when the first delivery of the buoys is made.

*Willson offers to furnish a Lightship Buoy 11 feet by 14 feet for \$15,000, and smaller one for \$8,500.*

May 17.—T. L. Willson writes Deputy: 'Referring to your letter file 26283  
May 10. I beg to state that I will furnish to your department a large lightship buoy 11 x 14 feet in plan, having whistling tubes 4 feet in diameter and arranged to carry your departmental lantern at an elevation 30 feet above the water for \$15,000; and smaller lightship buoy, circular, 11 feet in diameter, whistling tubes 3 feet, \$8,500 detail plans of which are now being prepared.

*Willson asked for plans, prices, &c., for Gas Beacons on same principle as Gas Buoy*

June 15.—Deputy asks Willson to furnish him with plans, specifications and prices for gas beacons operating on the same principle as automatic acetylene gas buoys. It is probable that an automatic beacon light would be of service to the department in British Columbia.

*Willson names \$1,325 for half ton carbide capacity.*

June 22.—Willson replies—says price for beacon holding half ton of carbide would be \$1,325. Detailed plans will be furnished in the near future, to the department.

*Startling Recommendation by Commissioner of Lights.—Endorsed by Minister acted upon.—Marked on Margin 'File no action' July 31, 1905. J. F. F.*

July 6.—Memorandum by Commissioner of Lights.

On the 6th March, 1905, the undersigned prepared a memo. giving facts and figures with reference to the signal buoy service of the Dominion. The salient points were the recommendation to provide 40 standard automatic lighted whistling buoys at \$3,750 each. This matter was not acted upon at the time, but the supplementary estimates for 1905-6 contain an amount of \$360,000 to provide for these buoys. Since the introduction and testing of the standard lighted whistling buoys two and much larger types have been evolved. The standard whistling buoy heretofore adopted is 9 feet in diameter, carries twin whistling tubes 20" in diameter, has a whistle and carries its light 10 feet above the sea-level, and costs \$5,000. A much larger and more powerful type is now available, 11 feet in diameter with twin whistling tubes 36" in diameter, carries an 18" whistle, has four times the whistling capacity of the standard type, and carries its light 30 feet above sea level, and is a practical substitute for a lightship. The cost of this is \$8,500.

A still larger buoy is available for special positions, elliptical in plan, the major axis of the ellipse being 11 and 14 feet. It carries twin whistling tubes 4 feet in diameter, has an 18-inch whistle with six times the whistling capacity of the standard buoy, carries a powerful light 30 feet above sea level.

In view of the larger and more powerful types available, the undersigned is prepared to recommend that these be substituted for the smaller standard lighted whistling buoy.

Owing to the inability of the undersigned to visit Nova Scotia at the time, Mr. Hutchins, superintendent of lighthouses, came to Ottawa, and the question of improvement of the coast signal buoy service was thoroughly discussed with him, and the undersigned now recommends that the department place orders for the following apparatus, viz.:—

1. Two elliptical lightship gas buoys, 11 x 14 feet, at \$15,000 each, for Halifax and Blonde rock (\$30,000).
2. Thirty cylindrical lightship gas buoys, 11 feet in diameter, \$8,500 each (\$255,000).

## SESSIONAL PAPER No. 29a

3. Twenty-five standard No. 7 gas buoys, at \$3,000 each (\$75,000).  
Total, \$360,000.

(Note: At the beginning of this memo. he states that the standard whistling buoy heretofore adopted is 9 feet in diameter carries twin whistling tubes 20 inches in diameter, has a 10-inch whistle and carries its light 10 feet above the sea level, and costs \$5,000).

These latter (the 25 standard No. 7's) to complete buoyage required for Quebec agency, and partially replace the 39 Scout Kingston type of gas buoys withdrawn from the service.

In order to obtain this material within the fiscal year for which the appropriation is available, the undersigned recommends that it be ordered immediately. (Initialed J.F.F., R.P.).

*Twelve No. 5 buoys ordered.—Destination to be given later.*

July 12, 1905.—Deputy advises T. L. Willson that the department will require 12 No. 5 automatic gas buoys to be placed in hand, and advise when the department may expect delivery of the same. Shipping directions to be given later.

July 19, 1905.—T. L. Willson acknowledges receipt of the order for 12 automatic gas buoys, No. 5.

*New standard No. 8½ instead of old No. 7.*

July 19, 1905.—T. L. Willson informs the Deputy that in future the standard automatic gas buoys will be different in form, being hemi-spheroidal in shape, and 8½ feet in diameter, this being the strongest form and a very great improvement over the existing form.

*Eight No. 9 buoys for Halifax.*

July 21, 1905.—Willson ships 1 buoy, gas and whistling, No. 9, No. 543, to Halifax.

July 25, 1905.—Willson sends invoice for 7 No. 9 gas and whistling buoys Nos. 539, 541-2, 544-7, held to the order of the department (most of these shipped to Halifax shortly afterwards—Aug. and Sept.) See Parsons' letter 10th Aug., 1905, below.

*Fifty thousand dollars paid, Willson.*

July 27, 1905.—Deputy sends Willson cheque for \$50,000 in payment for 10 auto. buoys.

July 28, 1905.—Willson notifies that he has shipped 27th July to Halifax 1 No. 9 gas and whistling buoy, serial No. 542.

August 3, 1905.—Willson notifies that he has shipped 2nd August to Halifax 1 No. 9 gas and whistling buoy, serial No. 541.

*Gregory instructed to remove lantern supports from all auto. gas buoys sent him and forward same to Ottawa.*

August 3, 1905.—Gregory acknowledges Deputy's letter 21st ulto., instructing him to remove the lantern supports from all the automatic gas buoys which have been sent to his agency, and ship the same, in one car load if possible, to P. J. Powers, Ottawa. He says that he has shipped seventeen lantern supports to Powers. (What was the meaning of this?).

August 8, 1905.—Willson advises having shipped 5th Aug. to Halifax 1 auto. gas buoy, serial No. 539, No. 9.

*Experiments for altering and reducing weight of lantern supports made by Willson's engineer, and change recommended.*

September 6, 1905.—Frank Creelman, in the employ of T. L. Willson, writes to the latter on the subject of lantern supports; seemed desirable to determine whether

7-8 EDWARD VII., A. 1908

these lantern supports could be made strong enough without making the structure weigh too much. We had an experimental support 6½ feet high constructed exactly like the standard support, except the two lower panels are omitted, and the main leg angles are somewhat heavier than in standard, and he continues on giving details and explanations, and concludes by saying that he is of opinion that supports of 6½ feet and 5 feet high, will be amply strong, constructed like the experimental one; and he would recommend that all lantern supports of the sizes mentioned above be made with legs of 2½ x 2½ x ¾-inch angles, and the two lower panels of bracing omitted. In addition to overcoming the objections with regard to icing up, the new type of support will render the generator more accessible for cleaning and recharging.

September 18, 1905.—Willson advises having shipped to Halifax 2nd Sept. 1 No. 9 auto. gas buoy No. 546, as per instructions.

*Commissioner of Lights approves Creelman's suggestions.*

September 11, 1905.—Willson sends to Commissioner of Lights copy of Creelman's report on the subject of lantern supports, and he replies approving of Creelman's suggestions.

*Freight on buoys shipped to Halifax.*

August 10, 1905.—J. Parsons, agent M. and F., Halifax, writes that he has had to pay the freight on three buoys at \$72 each and \$82 for a fourth buoy, the difference of \$10 being for blocking the buoy. I have no knowledge of the terms on which the buoys were built, whether the shippers should pay the freight or not. Space for storing these large buoys at the present time is exceedingly limited. Please advise.

*Deputy replies to Halifax agent about freight and storage facilities.*

September 13, 1905.—The Deputy evidently took about 32 days to answer this letter. He acknowledges receipt of it on 13th Sept., and states that the buoys are received by the Department at Ottawa and the freight is paid by the department. I am aware that the facilities are limited, and the department has under consideration the question of providing proper facilities at that point.

September 19.—Willson advises having shipped to Halifax, on September 18, 1 No. 9 aut. gas buoy, Serial No. 547.

*Commissioner of Lights instructs Willson to adopt new style of lantern support for No. 5, No. 6½, No. 7, No. 8½ and No. 9 types of buoys.*

September 20.—The Commissioner of Lights writes T. L. Willson, acknowledging receipt of his letter of 11th inst., covering report of experiments made as to the strength of lantern supports proposed to be furnished by you for gas buoys. He is of the opinion that, from the results obtained, the type of lantern support proposed is sufficiently strong to meet our service conditions; and, furthermore, renders access to the valves easier, and lessens the chance of ice accumulating. You will therefore please furnish these supports for the following sizes of buoys, viz.:—Nos. 5, 6½, 7, 8½ and 9.

*Superstructure No. 7 valveless buoy shipped to Willson.*

September 25.—Assistant Commissioner of Lights, Prescott, writes T. L. Willson that he has shipped to his address one superstructure belonging to No. 7 valveless buoy.

September 28.—Willson advises that in accordance with instructions from department shipped to Halifax, September 23, 1 No. 9 buoy, Serial 546.

*Willson asked for list of all gas buoys made by him for department.*

October 5.—The Commissioner of Lights writes Willson, requesting him to furnish a list of all gas buoys made by him for the department, with the serial numbers and where shipped. (See next page.)

SESSIONAL PAPER No. 29a

*Willson instructs Halifax agent as to lantern supports and lanterns.*

October 10.—Willson sends commissioner of lights copy of a letter written by him (Willson) to Parsons, agent Marine and Fisheries, Halifax, on the subject of lantern supports and lanterns, indicating to him what to do.

*New lantern support, with purifier, for 506.—One now on buoy to be removed and replaced by the new one.—Old one send her 'o have purifier fitted to it.—Previously shipped you new lantern support and purifier for buoy at inner automatic station.—This buoy will have to be taken in, as some fitting is required in attaching new support, but this can easily be done.*

October 10.—T. L. Willson to J. Parsons: 'We have shipped you a new lantern support, fitted with a purifier, for buoy No. 506 (type No. 7). This is one of the standard gas buoys you have in service, either at Middle Ground or Neverfail. This support has attached to it a box containing the necessary connecting pipe valve and bolts to attach it to the buoy. The lantern support and lantern now on this buoy should be removed at the earliest opportunity and replaced by the new support and a clean lantern. This work could be done without taking the buoy out of service, if properly handled, on a day when the weather is not too rough. Please return the old lantern support to us here, that we may fit a purifier to it and send it to you for the other standard gas buoy you have. (Should have three.) We previously shipped you, along with the last automatic gas and whistling buoy we sent you, a new lantern support with purifier for the buoy you have on the inner automatic station. It is intended to use the whistle and rubber ball valves now on the buoy. As there is some fitting to be done in attaching this new support to its buoy, it will be necessary to take this buoy in, which can, of course, be done in this case, as you have in stock spare buoys of the same type, with purifiers already attached. Please return us the old lantern support from this buoy also. When the above work is done, all the automatic gas buoys in your division will be equipped with purifiers.

*Gas buoys received from Willson to date, 47.*

October 10.—Willson sends Commissioner of Lights the following memo.:—Of all the gas buoys shipped him to the order of the department, viz., 501 to 547, inclusive = 47 buoys: to Prescott, 10 No. 5, 2 No. 7; to Halifax, 3 No. 7, 9 No. 9; to Quebec, 12 No. 7; to Lévis, 5 No. 5; to Port Arthur, 3 No. 5; to St. John, 1 No. 9; to Pt. du Chêne, 1 No. 9, and one gas and bell buoy now in shop. (For more minute particulars, see page 2, Miscellaneous Excerpts.)

October 12.—The Commissioner of Lights asks Willson for cuts of the buoys to be used in the illustration of the annual report. (Furnished file. J. F. F.)

*See Minute of Lighthouse Board, 24 July, 1905, which passed the recommendation conditionally on one of the buoys being tested for 30 days successfully.*

October 17.—Memorandum by Commissioner of Lights: Says he drew the attention of the minister to the necessity of making arrangements for certain lighted whistling buoys for the Maritime Provinces and standard buoys for other localities for which provision was made in the Estimates for 1905-6. This matter was referred to the Lighthouse Board, and provisional recommendation was given, pending a 30 day test of the buoys referred to. The test has since been carried out with a No. 9 gas and whistling buoy at the position indicated, viz., adjacent to the *Lurcher* lightship, and test was entirely satisfactory, as can be seen by the report of the captain of the lightship, attached herewith. The undersigned (J. F. F.) therefore recommends that the formal order be given to Mr. Willson, as the minister has already approved of memo. authorizing these buoys (July 6, 1905), and has advised Mr. Willson to proceed with work.

7-8 EDWARD VII., A. 1908

(On the margin of this memo. is written: 'I concur for minister's signature. F. G.' 'Minister directs that this order be given, as he has visited the works, and is satisfied with the work on hand, which he orders to be carefully inspected from time to time. 19/10/05. F. G.')

*Order for buoys amounting to \$360,000 given to Willson.*

October 19.—Deputy Minister (countersigned J. F. F.) has to inform T. L. Willson that the department will purchase from you the following buoys, viz.:—

30 No. 11 combined gas and whistling buoys, No. 11, 11 ft. diameter, at \$3,500 each—\$105,000.

35 standard No. 8½ gas buoys, at \$3,000 each—\$105,000.

The price quoted above to be F.O.B., Ottawa. The necessary shipping directions will be given you from time to time, as the buoys referred to are ready for delivery.

October 28.—Willson writes Deputy: Acknowledging receipt of the order of October 19 for 30 No. 11 aut. gas buoys at \$3,500 each, and 35 standard aut. gas buoys No. 8½ at \$3,000 each; all of above to be suited for your departmental lanterns.

*St. John agent asks for 3 gas and whistling buoys.*

November 30.—F. J. Harding, agent, St. John, N.B., writes department, asking to be provided with three combined gas and whistling buoys, three combined gas and bell buoys and three gas buoys, for the use of the agency.

(This letter was not answered until January 18, 1906.)

*Auditor General asks under what authority \$40,000 was paid Willson.*

December 22, 1905.—The Auditor General writes deputy and wants to know upon what certificate was made the payment of \$40,000 to Thos. L. Willson.

(Crossed: 'Minister's authority. F. G.')

*Resident Engineer, Halifax, wants to know how the combined gas and whistling buoys are moored, also the gas and combined bell buoys.*

December 30.—J. A. Legere, resident engineer, Halifax, writes Commissioner of Lights, asking for plan showing how the combined gas and whistling buoys are moored; also the gas buoys and combined bell buoys, as it is outside of his jurisdiction; and that the agent at St. John, N.B.—Mr. Harding—having asked him (Legere), he thought he would write for it.

(Note: This letter was not answered until January 30, 1906.)

January 8, 1906.—Deputy writes to Auditor General inclosing certificate re payment of \$40,000 cheque No. 24,420 to T. L. Willson, Ottawa.

*Deputy to Auditor General in Explanation of Buoy Transactions.*

January 8, 1906.—Deputy writes Auditor General: 'I have to acknowledge receipt of your letter of the 20th ulto. calling attention to the following payments made during last year from the vote for the construction of lights, viz.: T. L. Willson, Ottawa, \$192,500. With reference to this amount I have to state that it was not practicable to call for tenders for gas buoys furnished by Willson inasmuch as they are patented and only supplied by him. I may add, however, that the prices charged for all gas buoys are proportionately to the gas contents of the same, and on this basis, the buoys supplied by Mr. Willson cost the department about one-half as much as the gas buoys furnished heretofore.'

SESSIONAL PAPER No. 29a

12 No. 5 Buoys Ordered to be Shipped to Prescott.—No Evidence of these 12 Buoys having been Shipped.

January 9, 1906.—The commissioner of lights instructs Willson to ship the twelve No. 5 automatic gas buoys which you have held for some time for this department, to the Dominion Light Depot, Prescott. Before doing so you will communicate with W. H. Noble to find out if the C.P.R. siding into the yard is open; and in any event you will please ship by the Grand Trunk, as the G.F.Ry. have agreed to absorb the switching charge from their tracks into the department. The automatic gas beacon has been, on instructions from me, forwarded to you from British Columbia. (Query: Why?)

(Note.—Memo. given by Willson, October 10, shows ten No. 5 buoys and two No. 7 buoys shipped to Prescott. It would seem from the instructions now given that these buoys had never left Willson's premises.)

SPARKS' CHAMBERS (Room 49),

OTTAWA, February 19, 1908.

Col. F. GOURDEAU,

Deputy Minister Marine and Fisheries Department,  
Ottawa.

DEAR SIR,—We find that a letter was addressed by you to Mr. T. L. Willson on July 12, 1905, to the effect that the 'Department will require twelve No. 5 automatic gas buoys to be placed in hand, and advise when the department may expect delivery of the same. Shipping directions to be given later.'

On July 19, Mr. Willson acknowledges receipt of the order for twelve No. 5 automatic gas buoys.

On January 9, 1906, the Commissioner of Lights instructs Willson to 'ship the twelve automatic gas buoys, which you have held for some time for this department, to the Dominion Lighthouse Depot, Prescott.'

We can find no subsequent trace of these buoys, and shall be glad if you can explain what became of them.

Your obedient servants,

THOS. FYSHE,  
P. J. BAZIN,

Civil Service Commissioners.

The Deputy Minister replied as follows:—February 21, 1908.—

I have just received your letter with reference to the disposition of twelve No. 5 gas buoys ordered by this department from Mr. T. L. Willson on January 9, 1906, and stating that you are unable to trace the disposition of these buoys. I must say that I was surprised that there should not be a proper record of this matter, and took occasion to look into it personally, and I send for your information files Nos. 27122 and 26860, together with the official 'record of automatic gas buoys, book No. 1, which belongs to the Commissioner of Lights Branch, and I have marked the portions of the files and of the record book referring to the disposition of these buoys. You will observe that instructions were given to the manufacturer to ship these buoys to Prescott, that later directions were given to the L. H. Depot at Prescott to ship certain of these buoys to New Brunswick, that to avoid expense the L. H. depot directed the manufacturers to make the shipment from Ottawa, and further, that the remaining buoys, covering the buoys not directed to be sent elsewhere, were sent to Prescott. I have no objections to give the Civil Service Commissioners any information which may be required with reference to the operation of this department, but at the same time I am advised that the facts upon which you want information are not within the scope of your inquiry.

7-8 EDWARD VII., A. 1908

SPARKS BUILDING,

OTTAWA, February 26, 1908.

Col. GOURDEAU,  
Deputy Minister Marine and Fisheries Department.

DEAR SIR,—We have to acknowledge receipt of your letter of 21st instant in explanation of the inquiry made in our letter of 10th instant. Your explanation does not quite fit the facts—inasmuch as the nine buoys shipped to Campbellton and Chatham and three to Prescott at the time named, were all type No. 6 buoys. The twelve No. 5 buoys which we inquired about were ordered from Willson not, on the 9th of January, 1906, as you say, but on July 12, 1905. The order was acknowledged by Willson on July 19, 1905, and on January 9, 1906, when the Commissioner of Lights instructed Willson to send the buoys to the Dominion L. H. depot, Prescott, he described them as the twelve No. 5 automatic gas buoys which you have held for some time for this department.

Some further explanation would seem to be necessary.

Your obedient servants,

THOS. FYSHE,  
P. J. BAZIN,

*Commissioners of the Civil Service.*

*Auditor General asks what Precautions Department have taken with Willson Buoys—there being no Competition.*

January 11, 1906.—Auditor General to Deputy: Referring to payments, amounting to \$102,500 to T. L. Willson and asking (as competition not possible, Willson being the only maker) if the deputy had taken the necessary care to ascertain the cost of these buoys and their superiority over the buoys heretofore used in the lighthouse and coast service of Canada. Would not the excellence of manufacture, the quantity of material used and the record of the proposed buoy in other countries be considerations to be taken into account, in addition to its capacity, before finally deciding to adopt the buoy offered by Mr. Willson, in preference to the one in use at the time? shall be obliged therefore if you will let me know in what manner you satisfied yourself in regard to these features of the buoys in question before finally deciding to accept them in preference to the buoys in use at the time.

Are the Willson buoys manufactured in Canada, and are they used elsewhere than in connection with the lighthouse and coast service of Canada?

*Payment to Willson, \$40,000.—Further certificate wanted from J. F. Fraser.*

January 11.—The Auditor General writes re payment of \$40,000 in favour of Willson. Finds that J. F. F.'s certificate does not state the value of the buoys delivered to the department and accepted, as in all respects according to contract at the time he certified, for the minister's information, that it would be proper to make an advance of 80 per cent of the contract amount. Please obtain from Mr. J. F. Fraser a further certificate to this effect.

*Washington asks for Information about Willson Automatic Acetylene Gas Buoys.*

January 15.—Department Commerce and Labour, Lighthouse Board, Washington writes to Deputy: 'The board has the honour to ask what class, if any, of acetylene buoys are in use in the Canadian lighthouse service; the cost of these buoys, how they act, and if they have proven to be satisfactory in Canadian waters. The board also beg to ask if the Department of Marine and Fisheries can recommend the use of these buoys to the United States lighthouse establishment?'



## SESSIONAL PAPER No. 29a

Willson informs J. F. F. what the Standard Gas Lighted and Combination Whistling Buoys for 1906 will be, as if it depended wholly on himself, the Department having to take what he says.

January 17.—T. L. Willson writes J. F. F., Commissioner of Lights: that the standard gas lighted and combination whistling buoys for 1906 will be:—

A. Standard buoys suited to carry 300 m/m occulting lanterns, 9 feet above water, capable of giving 30 times the light of the usual compressed oil, gas or Pintsch buoy now in service.

B. Eleven feet diameter cylindrical whistling buoys suited to carry 375 m/m occulting lanterns 30 feet above water, giving a light equal to about 3rd order lighthouse, and each carrying two whistling tubes 3 feet in diameter—draught about 27 feet.

C. Eleven by fourteen and a half feet oval whistling buoy suited to carry 500 m/m occulting lanterns 30 feet above water, giving a light about equal to a second order lighthouse, and each carrying 2 whistling tubes 4 feet in diameter—draught about 27 feet. Both of the latter have eighteen inch diameter whistles. (File—no action, January 17, 1906. J. F. F.)

*Deputy Replies to St. John Agent's Request of November 30, last.*

January 18.—The deputy acknowledges receipt of St. John agent's letter of November 30, and stating that the department cannot at present accede to his request, but the buoys will be sent to you as soon as they are manufactured, possibly by the 1st May.

(A memorandum dated January 18, says: 'One of the gas buoys referred to for St. John harbour has already been shipped from Prescott.)

*Improvement in lantern support on buoys suggested by Captain Johnson of 'Lady Laurier.'*—Willson would like to know if Department Desires it.

January 18.—Willson writes Commissioner of Lights: On a recent trip to Halifax our Mr. Creelman had his attention called by Captain Johnson of the *Lady Laurier* to the advisability of omitting the platform plates from the lantern supports of our Standard gas buoys, as they are likely to gather ice, and in his opinion they are not needed for attending to lanterns. We would like to know if the department desires us to omit these plates, we to put the holes in the supporting angles and supply the platform plates ready to rivet on, if at any time the department should desire to have them.

*The Commissioner of Lights approves of the suggestion.*

January 22.—Commissioner of Lights replies: It may possibly be that the omission of those plates would prevent the accumulation of ice on the upper part of the lantern support; and as this is a matter that can only be determined after a trial, I have to request you to omit the plates from the standard gas buoys to be supplied. But you are to put the holes in the supporting angles and in the platform plates which otherwise would go on the gas buoys, and ship to the Dominion Lighthouse Depot at Prescott, with a covering letter explaining the object of the shipment.

(Note: The chief engineer does not appear to have been consulted about this, nor any one else.)

*Deputy replies to Washington about the Willson buoys.*

January 29.—Deputy writes U.S. Naval Secretary, Lighthouse Board, Washington: 'The low-pressure buoys are Willson type. The buoys which have been received and are in the service are Numbers 5, 7 and 9. Orders have been placed for Nos. 8, 11 and 14. The prices paid, or contracted for, by the department are as follows:—No. 5, \$2,000; No. 7 and 8, \$3,000; No. 9, \$5,000; No. 11, \$8,500, and No. 14, \$15,000. The buoys in service have given satisfaction, and the number in use

7-8 EDWARD VII., A. 1908

is to be material increased; and the Willson acetylene low-pressure buoys can be recommended by the department.

January 30.—Commissioner of Lights to J. A. Legere, Resident Engineer, Halifax, inclosing blue prints covering the method of mooring automatic gas buoys.

January 31.—Deputy writes another letter to U.S. Naval Secretary: Going over exactly the same ground, then goes on as follows:—This department has had in the past considerable difficulty in carrying out its policy of providing an efficient buoy-lighting system, and has taken great pains to test and investigate the Willson buoy, with the result that it has been fully adopted; and the department purchases no other types. It is regarded as a distinct improvement on all others which the department has used. I can, therefore, recommend it to your board. Some detailed information appears in the report of this department for 1904 and in the report for 1905, which will be issued shortly. Should you desire, I will be pleased to forward you copies.

*Willson instructed to place receptacle for attaching submarine bell on buoys, in place of bracket as at present.*

February 9.—Deputy to Willson: 'I have to instruct you to place the necessary receptacle for attaching the submarine bell to the buoys in place of the cast steel bracket which the specifications provide, on the understanding that this change entails no additional cost to the department.

*Willson wants shipping instructions for some No. 11 buoys now ready.*

March 10.—Willson informs the department that he is ready to begin delivery of some of the No. 11 lighted whistling buoys, complete, and asking for shipping instructions.

*They go to Halifax.*

March 12.—Deputy (J.F.F.) instructs Willson to ship the No. 11 buoys to the agent of the department at Halifax.

*J. F. F. so advises Halifax agent, and instructs him about a whistling test.—After whistling test made, No. 11 buoys to take places of Courtenay whistling buoys and No. 9 gas and whistling buoys.*

March 12.—Deputy (J. F. F.) writes Parsons, department's agent at Halifax: 'I am advised by the manufacturer that some No. 11 lighted whistling buoys are ready for shipment. Instructions have been given to ship these to Halifax. You will arrange to have the first two buoys held at Halifax until the department is able to determine whether the 12-inch or the 18-inch whistle is the more suitable for this type of buoy. When this information has been obtained, the No. 11 buoys are to be placed in the exposed positions off the Nova Scotia coast, replacing the present Courtenay whistling buoys and the No. 9 gas and whistling buoys.

*Secretary of Shipping Federation, Montreal, pays his respects to the Deputy and to Willson, and suggests experiments with a red flashing light.*

March 13.—Thos. Robb, Manager and Secretary, Shipping Federation, writes Deputy, saying that a deputation of their federation had been inspecting the works of the Willson Gas Buoy Company. The members were much pleased at the department having given them the opportunity of seeing the manner in which the construction and details are being carried out. Suggests making experiments to show whether a red flashing light cannot be obtained to show as far as a white flashing light, so as to illustrate the advantage of such an improved system as we learn has been adopted in Great Britain and the United States, in connection with the different river channels.

SESSIONAL PAPER No. 29a

*Deputy sends Willson copy of above letter, and says what he has promised.*

March 16.—Deputy writes Willson copy of above letter. I have replied that as soon as the large gas lanterns were received, that the test asked for would be carried out. Please advise me when you expect to receive the 375 mm. lanterns.

*New lantern for automatic buoy No. 502, No. 7, Prescott.*

March 16.—T. L. Willson advises having shipped a new lantern for automatic buoy No. 502 to breakwater contractor, Prescott. (No. 502 was second buoy constructed for the department.)

*Two No. 11 buoys for Halifax, 560, 561.*

March 16.—Willson advises having shipped two No. 11 combined gas and whistling buoys to Halifax. Serial Numbers 560 and 561.

*Deputy asks Halifax agent to advise him when whistling buoys arrive. Department will send expert to supervise test.*

March 24.—Deputy writes Parsons, Halifax agent, asking him to advise when the two lighted whistling buoys reach Halifax, &c. It is the intention of the department to send from Ottawa a competent person to supervise the tests.

*Three cars buoys arrive at Halifax from Prescott.*

March 26.—W. H. Olive, agent I.C.R., Montreal, wires J. F. F., Commissioner of Lights, that 3 cars of buoys have arrived at Halifax on 23rd from Prescott—864, 896 and 894. Please advise Willson. (Why from Prescott, and what buoys were they?)

*Parsons advised.*

March 26.—Same day, Deputy wires Parsons, Halifax: 'Three cars No. 11 buoys in Halifax. When can Laurier place these two to carry out whistle tests?'

*Prescott receives 3 No. 6 from Willson, and wants invoice, 550, 553, 558.*

March 27.—W. H. Noble, Prescott: 'On the 14th February we received by G.T.R. three No. 6 type buoys from T. L. Willson. Could you obtain an invoice for this material?'

*Commissioner of Lights instructs Willson regarding these. His reference to 12 No. 6 buoys not intelligible.*

March 29.—Commissioner of Lights, in connection with above, writes T. L. Willson: 'A request has been received from W. H. Noble for invoice of three No. 6 (5?) gas buoys shipped by you to Prescott. The invoices for the 12 gas buoys ordered were received by this department; and I have to request you to send duplicate copies of invoice for 3 gas buoys to W. H. Noble.' (Must look into this.)

*Duplicate invoice for 3 No. 6 buoys sent to Prescott.*

March 29.—Commissioner of Lights writes to Assistant Commissioner of Lights, Prescott, that Willson has been requested to send duplicate invoices for the three gas buoys referred to in your letter. I may state, the invoices for these buoys have been received by the department, and the accounts paid.

*Two No. 11 buoys arrived Halifax, March 24. 'Lady Laurier' not ready to make whistling test.*

March 30.—C. A. Hutchins, Superintendent of Lights, Dartmouth, N.S., writes to Agent Marine and Fisheries, Halifax: The two 11-ft. lighted buoys recently sent from Ottawa arrived at Halifax on the 24th inst. They are still on cars at deep water terminus, as the *Lady Laurier* was off for repairs when they arrived. As the *Laurier* repairs will not be finished before April 15, and as she is then required to

proceed to the *Lurche* lightship to supply water and coal, I beg to suggest that the testing of those 2 buoys be deferred until the *Laurier* returns from the *Lurche*. Due notice can be given to the department, in order that the person appointed to supervise the tests may be here in good time.

*Wilson* advises improvements in No. 11 buoy, and offers to change the No. 9 buoy, already delivered to the department to correspond with the other, free of charge to Department, on receiving them F.O.B. cars, Ottawa.

March 31.—T. L. Willson to deputy: Writes that improvements have been accomplished in the No. 11 combined automatic gas and whistling buoys, viz.:—

- 1st. The attachment of the receptacle for the submarine bell.
- 2nd. The increased height of the air chamber above the water in the whistling tubes.
- 3rd. The combined purifier head of the generator instead of being separate as the No. 9.

I will make changes in the No. 9 buoys which I have finished to correspond with the above, free of charge to your department; and, further, in the event of your department substituting the No. 11 buoys for the No. 9, I will take back and allow full value for the No. 9 buoys when delivered F.O.B. cars, Ottawa.

*Two station purifiers and ten cans purifying material shipped Prescott and Sorel*

April 4.—T. L. Willson sends invoice for material and work on two station purifiers and ten cans of purifying material shipped to Prescott and Sorel, as per letter March 17, containing bills of lading. (No amount given.)

*Two No. 11 buoys shipped—?*

April 5.—Wilson sends invoice for two automatic gas buoys No. 11, Nos. 562 and 563, shipped March 31 and April 5.

*Two No. 11 buoys safely landed at Dartmouth wharf.—They cost \$100 to be taken across the harbour.—In doubt about the efficient working of bell attachment on buoy now at outer automatic station.—Propose to change that buoy for one of the new ones, attaching bell to the latter.*

April 5.—C. A. Huehins, Superintendent of Lights, Dartmouth, advises the agent at Halifax that the two buoys have been safely landed on the wharf at Dartmouth. As they have no ship available and the cars were required, we were obliged to employ Reazley Bros. to rig a special purchase on their dredge to remove the buoys from the transportation from deep water terminus to Dartmouth cost \$100 for the buoys which was the best bargain we could make. In regard to testing, I beg to make the following suggestions. On March 14 last the *Lady Laurier* placed a combined gas and whistling buoy, with an improved submarine bell attached, at the outer automatic station. Capt. Johnson reports that the submarine bell sounded once after being submerged, and then ceased sounding. We have since had no opportunity of testing this buoy with the *Lady Laurier's* receiving apparatus, and I can't say whether or not the bell is still inoperative. At this outer automatic station is the most appropriate place for this large 11 feet buoy just received, I suggest that the buoy now there be brought in, the submarine bell removed, regulated again and attached to the 11 foot buoy, this new 11 feet buoy placed on that station, where satisfactory tests with the 12-inch and 18-inch whistles, &c., can most conveniently be made. If this plan is approved I will arrange to have the buoy brought in at a time most convenient for carrying out the change, and involving as little lost time as possible.

*Deputy acknowledges Willson's notification of improvements in the No. 11 and No. 9 gas buoys.—Department will not require a substitution of buoys, as No. 9 meets with requirements of the department for many localities.*

April 6.—Deputy (J. F. F.) writes to Willson acknowledging receipt of his letter of 31st ulto. re improvements which have been made in the No. 11 gas buoys and

SESSIONAL PAPER No. 29a

9 gas buoys. I am advised by the officer in charge that it is probable that the department will require a substitution of buoys, inasmuch as the 9 gas buoy meets with the requirements of the department for many localities where lighted signal buoys are necessary. If, however, a change is desired later on the department will be pleased to take advantage of the offer which you make.

*Willson writes Deputy about changing paints for the buoys.—Sherwin-Williams paints to be adopted.*

April 6.—Willson writes deputy at great length on the subject of changing paints for the buoys, giving apparent reasons for doing so; also correspondence exchanged between the Sherwin-Williams Paint Co., of Montreal, and T. L. Willson, and concluding by the adoption of the Sherwin-Williams paint. Willson says he has submitted the information verbally and has given instructions to proceed with the painting as described. He also adds that the paints, as described, are the most expensive on the market. (This letter not answered until June 1. Then it was declared to be entirely satisfactory; and necessary authority was given.)

*Deputy writes Hutchins, Halifax, about whistling test with No. 11 buoys and gives him instructions. Willson's man Creelman to be present.*

April 10.—Deputy to Hutchins, Halifax: Your letter 5th inst., the intention of the department in shipping to you the first two buoys of this type is to have them anchored side by side in some convenient point in Halifax harbour in order to determine whether the 12-inch or 18-inch whistle is the most suitable for this size buoy. The department has the choice of either and will select the one that is most suitable for this buoy. . . . Important that this whistle test be carried out as soon as possible, so that whistles may be ordered for the remainder of the No. 11 lighted buoys now under construction. On receipt of this letter please advise me when this whistle test can be carried out so that Mr. Creelman (Willson's man) can go from Ottawa to Halifax and be present at the test.

*Item for labour in P. J. Powers & Co.'s account re station purifier—not detailed sufficiently, and certified to.*

April 10, 1906.—Commissioner of Lights to T. L. Willson: 'With reference to accounts rendered by you for station purifier for this department, my attention had been directed by the Audit office to the item for labour, \$491.50. I have had the opportunity of looking over the accounts which have been rendered to you by P. J. Powers & Co., and I am perfectly satisfied as to the correctness of the charge, but it would be better to render to this department a copy of P. J. Powers' account and some further evidence from Mr. Powers that the amount of work charged for was actually performed on the work referred to.

*Claim for free entry of gasway tubes.*

April 12, 1906.—Geo. T. Merwin, Montreal, writes to U. P. Boucher, agent M. and F., Montreal, with reference to (his) mine of 29th instant, in which I (he) requested a free entry for gasway tubes for gas buoys (No. 61). Would say that this certificate had not come to hand as yet, and I would ask that you kindly hurry it forward.

April 14, 1906.—U. P. Boucher writes deputy inclosing copy of above letter, in which he states he has not yet received a free entry for gas way tubes as per my letter of the 30th ulto., in which I send you the said invoice, as we will need these for the opening of navigation.

*One No. 11 buoy to Halifax via Ste. Rosalie Junction.*

April 14.—Willson notifies the department having shipped one No. 11 automatic buoy to Halifax, care of J. Parsons, agent, via Ste. Rosalie Junction.

*Hutchins proposes arrangements for whistle test.*

April 16.—Hutchins, Superintendent of Lights, writes to deputy saying: As your letter expresses urgency in carrying out the test of whistles on those two 11 ft. buoys, I would suggest, on Friday morning the 20th inst., I proceed with the *Lady Laurier* to place those two buoys in the water ready to be towed out to the testing ground somewhere in the vicinity of the inner automatic buoy; that Mr. Creelman leave Ottawa as soon as possible after receipt of this letter, to be present here to direct the work. Presuming on your approval, I shall proceed to carry out my part, as soon as the *Lady Laurier* is handed to me, &c., &c.

*Whistle test.*

April 17.—C. A. Hutchins wires Deputy: Referring to your letter 10th and Mr. Creelman coming here at once. Letter—particulars mailed you yesterday.

April 18.—Hutchins wires J. F. F.: 'Wired deputy yesterday, send Mr. Creelman on; *Lady Laurier* now waiting to test whistle on buoys. *Laurier* cannot place marine bells until she returns from trip to Yarmouth about 30th April.

April 18.—Deputy wires Hutchins: 'Creelman be in Halifax Friday night. everything ready and weather fit try and conclude test by Saturday night.

*Automatic Gas Buoy—Accounts for Auditor General.*

April 18.—J. F. F. writes to W. Kearns, Audit Office, inclosing accounts aggregating \$25,325 for automatic buoys and beacons obtained by this department from T. L. Willson. You have the requisite accounts covering all these items, but accounts which are certified and inclosed indicate the points to which the materials shipped, and consequently contain more information than those in your possession. Will you please be good enough to send me the accounts which were forwarded to and replace them by the present ones.

April 19.—Deputy wires Hutchins: 'Letter 16th April re movements *Lady Laurier* approved. Creelman will be in Halifax Friday night.

*Exhaustive memorandum on automatic Acetylene Gas Buoys, by Commissioner of Lights.—Memorandum by J. F. F., Commissioner of Lights.—See original Memorandum by J. F. F., July 6, 1905, when he recommended ordering buoys to value \$360,000—Followed up by fresh Memo., 17th October, 1905, reiterating for recommendation—The order for \$360,000 of buoys was then given.—No Order in Council for this large expenditure has as yet been obtained; and in the meantime the Minister had died, hence the urgency for an Order in Council for a large amount, and hence this new and elaborate memorandum.*

April 18.—The undersigned desires to draw attention to the general question of gas buoys required for aids to navigation, to enable the department to carry out improvements promised to the shipping interests, and to meet the needs of navigation as they may arise from time to time. This department has had in its service in the past and has at the present moment, examples of each type of gas buoy which has been developed, and from practical experience is in position to determine which best meet the requirements of the service. The types of gas buoys referred to above are as follows: 1st. Compression buoys burning oil gas; 2nd. Compression buoys burning acetylene; 3rd. Low pressure acetylene buoys. Compression oil gas buoys were first developed, and originally consisted of a riveted steel buoy into which a rich specially purified oil gas, known as Pintsch gas was forced by a suitable compression

SESSIONAL PAPER No. 29a

A support carried the gas lantern sufficiently above the level of the water to render the rays of light collected by a lens within the lantern effective at a distance. The riveted steel construction was later improved by the substitution of a welded buoy body in one piece. This change was necessary on account of the difficulty of holding gas under high pressure, in a riveted envelope subject to the stress which gas buoys may experience in service.

Acetylene compression buoys differ from compressed oil gas buoys only in the substitution of acetylene for oil gas as the illuminant. Low pressure acetylene gas buoys carry within the buoy body a charge of carbide of calcium from which gas is generated as required. In method of operation the following difference in each type is observed.

In oil gas buoys the illuminant is made in special gas works on shore and transferred in holders to buoys in position. With compression acetylene buoys the same system may be employed, or the acetylene may be generated as required on the tender utilized for supply purposes. Low pressure acetylene buoys are filled with carbide through an opening in the buoy as required. Compressed oil gas buoys have been in the service of the department for more than twenty years. Compressed acetylene buoys for three years and low pressure acetylene buoys for one year; and the advantage of the latter over the former types may be summarized as follows :—

1st. In the compression type the gas is raised to a pressure varying from 150 to 225 lbs. per square inch. In the automatic type the pressure does not exceed a few pounds per square inch.

2nd. Compression buoys require for their maintenance a generating and compressing plant.

3rd. One compression buoy in position requires the same gas plant as a number of buoys or the gas must be transported from a distance in steel holders, whereas automatic low pressure acetylene buoys do not require any special charging facilities.

The considerations mentioned above determined the department on the recommendation of the undersigned to adopt low pressure acetylene buoys after practical test under service conditions. The automatic lighting principle has been adapted to signal buoys of different sizes. The following table shows the capacities and price charged for gas buoys, compression and automatic :—

COMPRESSION.

Type.	Gas capacity cubic feet per atmosphere.	Total capacity compression at 10 atmospheres and automatic at 4 atmospheres per pound.	Price without Lanterns.	Price per cubic foot of Gas Contents.	Number of Whistle Tubes.	Diameter of Whistle Tubes.	Area of Whistle Tubes.	Designation.
1c	176	1,760	\$1,200	\$ .68	.....	.....	.....	Shallow draft spar.
2	169	1,690	1,300	.77	.....	.....	.....	do do
3	138	1,380	1,200	.87	.....	.....	.....	Deep draft spar.
4	176	1,760	1,450	.82	.....	.....	.....	B 3.
5	353	3,530	2,200	.62	.....	.....	.....	B 1.
6	400	4,000	4,000	1.00	1	18"	1.76	Special.
7	1,980	19,800	11,500	.57	1	18"	1.76	Ocean.

AUTOMATIC.

8a	1,000	4,000	2,000	.50	.....	.....	.....	No. 5.
9	2,000	8,000	3,000	.37	.....	.....	.....	" 7.
10	2,500	10,000	3,000	.30	.....	.....	.....	" 8.
11	3,000	12,000	5,000	.42	2	20"	4.25	" 9.
12	3,000	12,000	8,500	.71	2	36"	14	" 11.
13	3,000	12,000	15,000	1.25	2	48"	25	" 14.

7-8 EDWARD VII., A. 1908

*Comparison of Pintsch Gas Buoys with the Willson Automatic Acetylene low pressure Buoys.*

A comparison of the two types of gas buoys, the details of which are given above, shows that the standard Pintsch gas buoy costs from .68 to .82 cents per cubic foot gas content, while the standard low pressure acetylene buoy costs 30 cents per cubic foot gas content (the above figures do not bear out this statement). A comparison of the special Pintsch whistling buoy with the No. 9 low pressure acetylene buoy shows that the Pintsch buoy costs \$1 per cubic foot, gas content, while the No. 9 lighted whistling buoy costs 42 cents per cubic foot.

Furthermore, it has an area of whistling tube more than double the Pintsch buoy. Comparing the ocean type of Pintsch buoy a cost of 57 cents a foot is found. The No. 11 low pressure acetylene buoy costs 71 cents per foot, while the area of whistling is more than seven times as great as that of a Pintsch buoy, while the absolute cost of the buoy is \$8,500 against \$11,500.

Comparing the ocean type of Pintsch buoy with the No. 14 low pressure acetylene buoy, the cost of the latter is \$3,500 greater. Its cost per cubic foot gas content is \$1.25, against 57 cents for the Pintsch buoy, but the area of the whistling tubes is more than twelve times greater than the Pintsch buoy referred to above.

The gas generated by the decomposition of carbide produces acetylene which burned volume for volume gives a candle more than five times Pintsch gas.

This test was carried out on the request of this department by the officer of the Department of Inland Revenue responsible for this class of work.

The larger gas lantern which has hitherto been developed for Pintsch gas buoys carries a lens of 300 m.m. diameter. While in order to increase the power of the acetylene lighted buoys of the larger size, gas lanterns have been developed carrying lenses of 375 and 500 m.m. diameter, or of the fourth or fifth order, while 300 m.m. lenses used in the larger sized Pintsch gas lanterns are equivalent to the sixth order. The low pressure acetylene buoys referred to above are the invention of T. L. Willson and are protected by patents issued in Canada and throughout the world.

The question of improvement of the signal buoy service of the Dominion by the substitution of No. 11 gas buoys was referred to the L. H. Board, and a provisional recommendation was given, pending a 30-day test of one of these buoys in an exposed position near the Lurcher shoal, Bay of Fundy. A No. 11 L.S. buoy not being available, the test was carried out with a smaller No. 9 lighted whistling buoy, low pressure type, which having passed the test successfully, a decision was given by the late Minister to provide the necessary No. 11 L.S. gas buoys, and instructions were given Mr. Willson to furnish thirty buoys of this type to the department; and also thirty-five No. 8 $\frac{1}{2}$  standard gas buoys. The undersigned recommends that the necessary steps be taken, by order in council, to cover the provision of thirty No. 11 L.S. gas buoys, thirty-five standard gas buoys, low pressure type, and that the necessary authority be obtained to order from time to time as the needs of the service may demand, automatic low pressure gas buoys of the Willson type. (Signed J.F.F., afterwards marked cancelled.)

*Application to Council in accordance with foregoing Memorandum—Cancelled.*

April 20.—The Minister to His Excellency Governor General in Council: 'The undersigned has the honour to submit to council the accompanying report from the Commissioner of Lights, Dept. M. & F., in regard to the general question of gas buoys required for aids to navigation to enable the department to carry out improvements promised to the shipping interests, and to meet the needs of navigation as they may arise from time to time. The undersigned reports that he has given the representations of the commissioner his most careful consideration, and approves of the suggestions contained in the report alluded to; and he therefore recommends that the necessary authority be given to cover the expenditure entailed in providing thirty No. 11 L.S. gas buoys at \$8,500 each, \$225,000; and thirty-five No. 8 standard gas buoys at \$3,000 each, \$105,000; making a total of \$330,000 duly voted by parliament; and that



SESSIONAL PAPER No. 29a

he be empowered to order from time to time as the needs of the service may demand, additional automatic low-pressure gas buoys of the Willson type. (Marked cancelled.)

*Three No. 11 Buoys for Halifax, 564, 565, 566.*

April 19, 1906.—Willson incloses invoices for 3 No. 11 buoys No. 564/6 with receptacle for submarine bell shipped to Halifax.

April 20.—Willson incloses invoices for two lantern supports and two boxes of wrenches for buoys 564 and 565.

April 21.—Willson incloses invoices for one No. 11 buoy No. 567 shipped to Halifax.

*Mersey Docks and Harbour Board want information from Commissioner of Lights about Willson buoys, acetylene lights, whistles and submarine bells.*

April 21.—Mersey Dock and Harbour board write C. of L. about Willson buoys fitted with acetylene lights, whistle and submarine bells. Wants information as to these buoys and also as to their efficiency. If you could let me have a drawing of one of them I would be glad, or perhaps you might put me in communication with the manufacturer.

*Hutchins reports favourably on whistle test—Recommends 12-inch whistle.*

April 27.—C. A. Hutchins reports to agent at Halifax of Department of Marine and Fisheries that he along with F. Creelman and Captain Johnson have made two tests of the buoy's whistles 12" and 18", and report favourably, and recommend the 12" whistle be adopted for use on those 11-foot gas buoys. The sound produced was loud, deep and well sustained. (Noted, this must be transmitted through the agent at Halifax, C.S. 30-4-06.)

*Willson borrowing whistles from Halifax agency.*

April 30.—Hutchins writes J.F.F. thus: 'Mr. Creelman received a telegram from Willson asking him to borrow two ten-inch whistles for temporary use on two buoys he was shipping to Upper Provinces, until he received a stock of 10" whistles I at once forwarded the whistles to Mr. Willson to be returned to the Dartmouth depot after he receives the 12-inch whistles. I also sent to Willson the two 18-inch whistles recently used here experimentally. Freight in both cases to be paid by Willson. (Noted, no action, J.F.F., 10-5-06.)

*Two No. 11 buoys for Depot Harbour, 568, 569.*

May 11.—Willson incloses invoices for two No. 11 automatic buoys, Nos. 568, 569; 568 shipped on 3rd inst., and 569 on 8th inst., to Depot Harbour, c/o J. F. Fraser, Commissioner of Lights.

*P. J. Powers & Co.'s account re two station purifiers.*

May 14.—Willson writes J. F. F. in answer to his letter April 10, file 25868, with reference to an account for two station purifiers, which account bears date April 14, 1906, for a total of \$869.25. I herewith inclose you detail statement from P. J. Powers & Co., for item of labour \$491.50 which was charged in a lump sum. All the material and labour charged to you on these purifiers has been put in at actual cost to me, and without any charge for drawing, designing or supervision.

May 23, 1906.—Willson sends invoice for one No. 11 auto. gas buoy, No. 570, shipped to Halifax.

May 25, 1906.—Willson sends statement dated 25th May, showing balance due him, \$80,104.65.

*Capt. Johnson objects to No. 11 buoys.—Not practicable.—Too large.*

May 28, 1906.—Captain Johnson of the *Lady Laurier*, writes thus: 'Before more large gas buoys are sent here, I think it my duty to inform you that the not practicable, as they are too large. The smaller size with a few alterations will be first class and quite safe. Marked 'immediate—Mr. Fraser, F.G.' (June 1, 1906). Deputy simply acknowledges receipt of this letter.)

*Capt. Johnson objects to any more No. 11 buoys being sent to Halifax.—J.F.F. surprised.—His hoisting gear is not strong enough.*

June 1, 1906.—Memorandum by J.F.F. for the deputy minister *re* No. 11 buoys, of which Captain Johnson of the *Lady Laurier*, complains as being not practicable and too large. Is not surprised at Captain Johnson taking this ground, so that the hoisting gear of the *Lady Laurier* has not strength enough to lift the buoy. The department has plans provided for a new derrick and hoisting gear, which will be capable of lifting a weight of 25 tons, which would obviate to a large extent Captain Johnson's objection.

*Application again made to Council in accordance with Commissioner of Lights' memorandum and recommendation to cover the \$360,000 order for buoys given by the late Minister, and for future orders.—Again withdrawn.*

June 4, 1906.—Minister to His Excellency in Council: 'The undersigned has the honour to submit to Council the accompanying report from the Commissioner of Lights, Department of Marine and Fisheries, which has been concurred in by the deputy minister, in regard to the general question of gas buoys required for aid to navigation to enable the department to carry out improvements promised to shipping interests and to meet the needs of navigation as they may arise from time to time. The undersigned reports that the late minister having given the representations of the commissioner his most careful consideration, having approved of the suggestions in the report alluded to, recommended that the necessary authority be given to cover the expenditure entailed in providing thirty No. 11 lightship gas buoys at \$8,500 each (\$255,000), and thirty-five No. 8½ standard gas buoys low pressure type at \$3,000 each (\$105,000) making a total of \$360,000, duly voted by parliament. The No. 11 lightship gas buoys to be placed at the following points, viz.: Nova Scotia, Sambro, Egg Island, Ship Harbour, Ship Harbour, Beaver Island, Liscomb, Isaac's Harbour, Whitehead, Cape Canso, Lunenburg, Brazil Rock, Lunenburg, Lahave, Lockport, Yarmouth Fairway, Canso, Fourchu, Northwest Ledge, Southwest Ledge, Little Hope Island, Sydney Harbour (20). New Brunswick: Split Rock, Musquash (2). Prince Edward Island: Indian Rocks, Tryon Shoal, West Point (3). Ontario: Lone Rock, Sequin Bank, Surprize Shoal (3). Quebec: Morin Shoal (1). British Columbia: Juan de Fuca Strait (1).

The 35 No. 8½ standard gas buoys to be utilized to complete the change from high pressure to low pressure buoys in the Quebec district, and for the purpose of removing from service the 'Scout' type high pressure gas buoys. (L.P.B.)

(Marked. Privy Council. Referred back. John J. McGee, 17 July, '06. F.F. J.F.F. Cancelled.)

June 4, 1906.—Memo. for minister by deputy: 'The undersigned transmits to the minister's information a memo. prepared by the Commissioner of Lights, in which he recommends that 30 No. 11 lightship and 35 No. 8½ gas buoys low pressure type be procured for the service of the department, and that low pressure buoys be adopted by the department, and that authority be given to procure the same as they may be required from time to time. The undersigned has given careful consideration to this memo. referred to and concurs in the recommendation contained therein.'

SESSIONAL PAPER No. 29a

*Re inspectors Willson may send to department's agencies.*

June 5, 1906.—Deputy to Willson: 'In future, if it is necessary for you to send any of your special inspectors to Parry Sound, or any other agency of this department, I have to request you to instruct them to report to Mr. Brais, agent (or the agent of the department in the district), who will provide facilities for carrying out any inspection desired.' (Initialled J.R.F.)

*Canadian Bank of Commerce again anxious.*

June 6, 1906.—The manager of the Canadian Bank of Commerce writes to the minister regarding the position of the contract between the department and Mr. T. L. Willson, as they (the bank) are seriously interested. (Accountant to prepare statement.—F.G.)

*Deputy replies that the department owes Willson about \$90,000, and further large deliveries will take place before end of fiscal year.*

June 11, 1906.—Deputy replies to C. B. of U., that the department owes Mr. Willson the sum of about \$90,000, and further large deliveries will take place before the closing of the accounts for the present fiscal year. The department has ample appropriations available to pay any account due Willson, and is only awaiting the passage of a formal order in council confirming the orders entered into by the department last October, with Mr. Willson. The order in council referred to is expected within a few days, when all amounts due Mr. Willson will be promptly paid.

*One No. 11 buoy shipped to Halifax, 571.*

June 11, 1906.—T. L. Willson incloses invoice for one No. 11 auto. gas buoy, No. 571, shipped to Halifax via St. Rosalie junction.

*Captain Johnson of 'Lady Laurier' objects to No. 11 buoys as too large.—A new derrick and hoisting gear promised him.*

June 13, 1906.—Deputy to Halifax agent (J.F.F.): 'Capt. Johnson of the *Lady Laurier* informs the department that in his opinion the No. 11 lightship gas buoys are too large, and he has to tow them into position. I have to request you to inform Captain Johnson that the department has plans provided for a new derrick and hoisting gear for the *Lady Laurier* which will be capable of lifting and controlling a weight of 25 tons, and thus obviate the objection raised by Captain Johnson.

June 13, 1906.—T. L. Willson sends account for 50 cans of gas purifier (4,000 lbs. at 5c.) and 50 cans 5c. each.

*Three No. 11 buoys held to order of department, 572-3-5.*

June 20, 1906.—T. L. Willson incloses invoice for 3 No. 11 auto. gas and whistling buoys, 572-3-5, held to order of Marine Department at Ottawa.

*One No. 11 shipped to Halifax, 574.*

June 21, 1906.—T. L. Willson incloses invoice for 1 No. 11 auto. gas and whistling buoy, 574, shipped to Halifax.

*Two No. 11 held to order of department, 576-7.*

June 22, 1906.—T. L. Willson incloses invoice for 2 auto. gas and whistling buoys, 576-7, held to order of department at Ottawa.

*Canvas for chutes.*

July 6, 1906.—Commissioner of Lights writes Willson asking him for quotations on canvas for chutes for loading gas buoys.

*Chutes prices.*

July 9, 1906.—Willson quotes as follows: 10 chutes for No. 5 buoys, \$1.21 each; 9 chutes for No. 7, \$2.04 each; 14 chutes for No. 11 buoys, \$2.42 each.

*One No. 11 buoy shipped Halifax, No. 577.*

July 10, 1906.—Willson to deputy: 'As directed by you, we have shipped to Parsons, Halifax, one No. 11 buoy, serial No. 577.

Where to and what?

July 12, 1906.—Willson sends invoice for one auto. buoy, serial 578, shipped 30 July (where to?).

*12-inch whistles to be supplied for No. 11 buoys.*

July 16, 1906.—Deputy authorizes Willson to supply 12-inch whistles for the No. 11 gas buoys.

*Deputy's memo. for J. F. Fraser.—Authority for big purchase of buoys (Oct., 1905) be got through Privy Council.*

July 16, 1906.—Memorandum for J.F.F.: The following is translation of a memo received on Saturday at 4 p.m from the minister: 'The old recommendation in connection with the purchase of buoys is not the copy of the one already before council. I also want copy of the report of Mr. Fraser, that accompanied the other recommendation to council.' I have to leave this afternoon for Quebec and as the minister is very anxious to have all the matters in which you are interested passed by council you had better remain here and meet the minister either to-morrow evening or Wednesday morning and give him all the information he requires in connection with the matters to be passed in council.'

L. P. B.—Minister's report to Privy Council on the subject of gas buoys, recommending the necessary authority to cover the expenditure entailed in providing 30 lightship buoys No. 11 at \$8,500 each and 35 No. 8½ Standard gas buoys at \$3,000 each, making a total of \$360,000, duly voted by Parliament. (Privy Council referred back J. J. McGee, 17 July, 1906.—Marked, 'cancelled' in blue.)

*Hints to J. F. F. in Drafting Application to Council.—Trial of a new Buoy a Great Success.—Lighthouse Board and Technical Officer in Charge Strongly recommended it.*

July 20, 1906.—Memo. for Mr. J. F. Fraser: *Re* drafting the report to council you will utilize the following points: High pressure buoys offer a constant danger even loss of life and considerable destruction of property.

In 1904, Mr. T. L. Willson patented an automatic low pressure buoy that the Lighthouse Board looked into and recommended the trial of. The result was a great success; and the Minister (Mr. Préfontaine) on the recommendation of the Lighthouse Board consented to adopt this buoy. The minister also acted on the recommendation of the technical officer in charge of that service and gave instructions to purchase these buoys at the price indicated. The undersigned since then, has carefully and personally looked into this question. He has examined into the price paid, and has established the fact that Mr. Willson has sold to other countries buoys at the very same price, and therefore recommends the payment of the price arrived at between the late Minister and Mr. Willson.

Memo. of April 18, 1906 (given above) again filed.

*Another application to Privy Council—Application again cancelled.*

July 21.—Minister to His Excellency in Council: The undersigned has the honor to submit to council the accompanying report from the commissioner of lights, Depa

## SESSIONAL PAPER No. 29a

ment of Marine and Fisheries, which has been concurred in by the deputy minister in regard to the general question of gas buoys required for aids to navigation to enable the department to carry out improvements promised to the shipping interests, and to meet the needs of navigation as they may arise from time to time. In 1904 Mr. T. L. Willson patented an automatic low pressure gas buoy and placed at the disposal of the department three buoys for the purpose of carrying out certain tests. These buoys were placed in service and adopted by the department. Mr. T. L. Willson also designed and built certain large lighted signal buoys and the question of the adoption of these lighted signal buoys has been referred to the Lighthouse Board of Canada, and it was recommended that a 30 day test be carried out in an exposed position. This test was completed in a satisfactory manner at the Lurcher shoal, Bay of Fundy; and the late minister gave directions to purchase 30 No. 11 lighthouse gas buoys at \$8,500 each (\$255,000) and 35 No. 8½ Standard gas buoys, low pressure type, at \$3,000 each (\$105,000), making a total of \$360,000 duly voted by parliament. These lightship gas buoys have been assigned to the following points:—

(Same as contained in minister's letter to council dated June 4—see above.)

The undersigned has carefully considered the question of prices and has examined the basis on which these have been arrived at, and finds that the manufacturer has now under construction for the United States Government, subject to their approval and test, several gas buoys of various types; and the prices submitted to the United States Government are identical with the prices charged this department. The undersigned therefore recommends that authority be given to enter into a contract with Mr. T. L. Willson for the gas buoys referred to (marked 'Cancelled').

*Final Application to Council which was Passed.*

July 24, 1906.—To His Excellency in Council: 'The undersigned has the honour to submit that previous to August, 1904, the department had in its service gas buoys of various sizes of the compression type; that a certain number of the compression gas buoys burned oil gas and that the remainder burned acetylene; that on or about the date referred to above, an automatic low pressure acetylene gas buoy was invented by Thos. L. Willson, of Ottawa, who offered to the department several of the low pressure buoys to be tested under service conditions. Two of the four sample buoys submitted were tested under service conditions of the Lighthouse Depot at Prescott, Ont., and in October, 1904, the commissioner of lights submitted a detailed report to the department in which it was recommended that 12 No. 5 gas buoys at \$2,000 each, 20 No. 7 at \$3,000 each, and 10 lighted whistling buoys No. 9, at \$5,000 each, be procured by the department at a total cost of \$134,000, in addition to the acceptance of the 4 test buoys referred to above which cost \$14,000. The report referred to above contemplated an expenditure of \$148,000 which was approved by the late minister and the material ordered by departmental letter of 11th October, 1904. These buoys were delivered to the department in due course and are now in service.

On the 6th March, 1905, the commissioner of lights prepared a report on the signal buoy service of the department and recommended that the Courtenay whistling buoys in use be replaced by No. 9 lighted whistling buoys of the Willson type, as the supplementary estimates of 1905-6 contained an amount of \$360,000 to provide for improvements in that service.

*Increase in size from No. 9 to No. 11, July 6, 1905.*

On 6th July, 1905, a larger and more powerful lighted signal buoy having been designed, it was recommended that the No. 11 automatic low pressure lighted whistling buoy be substituted for the smaller No. 9 lighted whistling buoy in the changes contemplated.

October 17, 1905, \$360,000 buoys ordered.

On the 17th October, 1905, the attention of the then minister was directed to the necessity of taking action in the matter of providing gas buoys if it was the intention of the department to carry out the improvements recommended. The then minister having, previously to the date immediately referred to above caused this matter to be submitted to the Lighthouse Board, a 30 day test was imposed, which was successfully carried out in the vicinity of the *Lurcher* lightship, Bay of Fundy, and directions were given to order from Mr. T. L. Willson 30 combined gas and whistling buoys 11 feet in diameter, 35 Standard No. 8½ gas buoys at \$3,000 each, the value of the order above being \$360,000. This was done by departmental letter of 19th October, 1905.

Previous to the introduction of the Willson low pressure automatic acetylene buoys the welded compression buoys required for the service were purchased without competition. The advantages of the Willson low pressure acetylene buoys over older types of compression buoys may be summarized as follows: 1. In the compression type the oil and acetylene gas is raised to a pressure varying from 150 to 200 lbs. per square inch; in the automatic type the pressure does not exceed 5 lbs. per square inch. 2. Compression buoys require for their maintenance a generating and compressing plant, while no special plant is required for charging low pressure automatic buoys. 3. A compression gas buoy service of but one buoy requires for its maintenance the erection of a special gas plant to manufacture oil or acetylene gas, while the same plant could provide gas for a number of buoys of the same type; and if the gas is stored in steel holders, practically the same number of holders is required for one compression buoy as would serve to charge a number. Carbide of calcium in tins is the only material necessary for recharging automatic low pressure buoys. In the matter of safety the low pressure buoys are superior to the compression type. With the former no accident, such as that which occurred at Kingston, in April, 1905, would have been possible. The considerations mentioned above determined the adoption of the Willson low pressure acetylene buoys after a test under service conditions. It was further reported that the prices at which the acetylene low pressure buoys were ordered, were fair and just as appears from the following table which makes a comparison between the prices of low pressure gas buoys and automatic gas buoys. (See comparison given in Ministerial letter to Privy Council, April 18, 1906. See page 219—MS. 14.)

The undersigned has carefully considered the question of prices, and has examined the basis on which these have been arrived at, and finds that the manufacturer has been under construction for the United States government several gas buoys of various types; and the prices submitted to the United States government are identical with the prices charged this department. (This omits to state, what is done in previous years, except, that the order of the United States government is experimental and subject to test and approval. Besides, Willson would not have dared to ask less from the United States government in view of his relations with that of Canada. The prices, however, is not the same, because in our case the duty on Willson's materials is exacted by the contract.)

The undersigned observes that the Willson low pressure gas buoys are manufactured in Canada, while, the welded compression buoys heretofore used were manufactured in foreign countries (G. B. I.) The adoption of low pressure buoys has created a new Canadian industry and gives employment to a large number of workmen. The undersigned therefore recommends that authority be given to pay for 30 No. 11 lightship gas buoys, and 35 No. 8½ standard gas buoys ordered by departmental letter of 19th October, 1905. (Passed by Privy Council.)

*Four No. 11 Buoys shipped, Halifax.*

July 30.—Willson incloses invoice four No. 11 buoys shipped to Halifax, 581 and 582 via C.P.R. and Intercolonial Railway. 579 and 580 by G.T.R. and I.O.R., shipping bills for 576, 578.

SESSIONAL PAPER No. 29a

*Claim for cost of alterations to buoys by Dept. Agent at Quebec on T. L. Willson.*

July 4.—Quebec agent writes T. L. Willson: 'As instructed by your Mr. Smaill, some alterations have been made to the automatic acetylene gas buoys for which I inclose certified pay-list. Please forward the amount with as little delay as possible, as these men are wanting their wages very badly.'

*Willson disclaims liability for it—C. of L. supports Willson's contention.*

July 6.—Wilson to Deputy: Inclosed please find letter from J Gregory, agent, Department of Marine and Fisheries, Quebec, dated 4th inst., referring to file 19328 of that agency. This work was done on account of improvements made in this type and class of buoy since these buoys were delivered to and accepted by the department. The actual parts for these improvements were furnished by me free of charge to your department, and the work of attaching the same to the counterweight was performed by the firm of F. X. Drolet at a contract price of \$15 for each buoy, which includes transportation of counterweight from your dock and return. This work I pay for myself. The question arises as to whether it is a proper thing for me to pay for labour of department employees on the premises of the department in connection with the actual service of the department? P.S.—The account which Mr. Smaill requested your Mr. Gregory to certify as correct was to be the bill of Drolet, upon completion of his work and delivery to the department in good order. (Written across upper left corner, 'I consider department should pay this account, J. F. F., 3-8-06.' 'The payment of this account involves a principle and is therefore referred to the minister for ruling.' C. S., 4-8-06. 'Bring up on our return F. G.' 'Bring up 15th September, J. D. D.')

*Three No. 11 Buoys shipped to Halifax, and three held over.*

August 4.—T. L. Willson incloses invoice for 6 type 11 gas buoys Nos. 583/8, the three first shipped to Halifax, and the other three are held subject to your order.

*Three more for Halifax.*

August 6.—T. L. Willson incloses shipping bills for three type 11 buoys 583/5 shipped to Halifax.

*One No. 11 Buoy and thirty-five No. 8.*

August 9.—T. L. Willson incloses invoice for one type 11 buoy No. 589; also 35 type 8 $\frac{1}{2}$  buoys Nos. 590/624 inclusive (marked certified and forwarded for payment, J. F. F., 9-10-06.)

*Buoys not accounted for.*

Memo., 20th June, 1906, three buoys 572/5 held to order—No trace of delivery.

Memo., 4th August, 1906, three buoys 586/8, held to order—No trace of delivery.

*Chutes suddenly wanted.*

August 8.—M. Brais, Agent, Parry Sound, telegram J. F. F.: 'Please advise me when will canvas chutes be shipped. Three Star shoal buoy reported out. Being unable to reach Richmond immediately sent Jones to investigate. Should buoy have to be recharged, have no chute for the purpose. Wire reply.'

August 8.—J. F. F. to Brais: 'Am sending you by express to-morrow 8 canvas chutes for 3 sizes buoys.'

*To be sent to Parry Sound.*

August 8.—J. F. F. to Willson: I have to instruct you to ship by express to M. Brais, agent, Parry Sound, 3 canvas chutes for No. 5 gas buoys, 2 ditto for No. 11 gas buoys, and 3 for No. 7 buoys.

*Also to Prescott.*

August 8.—J. F. F. to Willson: I have to instruct you to prepare for shipment 10 chutes for No. 5 gas buoys at \$1.21, 23 chutes for No. 7 gas buoys at \$2.04, and 14

7-8 EDWARD VII., A. 19

chutes for No. 11 gas buoys at \$2.42. Shipping instructions will be given you later. Shipped to Prescott.

*Improper regulating of automatic buoys at Morrisburg to be inquired into.*

September 19.—J. F. F. to Assistant Commissioner of Lights, Prescott: Mr. Frank Creelman, of T. L. Willson's staff, states that his assistant, Mr. Smail, informed him that on August 13, while at Prescott, Mr. Leslie stated that the regulator of the automatic gas buoy at Morrisburg was adjusted for 2" pressure, and further, that this was the regular pressure at which these lanterns were set. Please inquire into this matter, as you are aware that the occulting boxes are set to 4" and the regulator to 3".

*Instructions re shipment of buoys given to T. L. Willson.*

September 19.—Memo. for file: Instructions have been given to T. L. Willson to make the following shipments of gas buoys:—

- No. 11 whistling buoy, with 500 lbs. bell, for Morin shoal (file 21159).
- 12 No. 8½ to Quebec agency (file 19505).
- 5 " Parry Sound (26826).
- 7 " Montreal-Kingston division (26827).
- 3 " Port Arthur (19387).
- 4 " Mr. Boucher, ship channel (27041). Total, 32.

*Willson's account against department to date.*

November 2.—Willson's account for buoys and material up to date, since October 1904, when the automatic gas buoy was adopted by the department, \$541,634.68. (For details, see 3 folios forward. Page 231.)

*Two No. 5 buoys and one No. 7 valveless shipped to Willson—Refer to page 237 (MS. 29).*

November 2.—Assistant Commissioner of Lights, Prescott, to T. L. Willson: There has been shipped to your address, per O.P.R. freight, as per statement of supplies herewith inclosed, 2 automatic gas buoys No. 5 and 1 automatic gas buoy No. 7 (valveless). This latter I have taken the opportunity of shipping on the same car, as it has not been, nor is likely to be, of any service until alterations are made. Please acknowledge receipt of these buoys on the inclosed form.

*Improvements on buoys offered by Willson. Willson offers to make improvements in No. 9, also in Nos. 5, 6 and 7 buoys, which are now equipped with detachable purifier boxes, instead of fixed ones.*

November 7.—T. L. Willson to Deputy: Referring to my letter March 31, 1906, and yours April 6, 1906, I will make the improvements in the No. 9 gas buoys, as offered; and further, that I will make improvements in the 5, 6 and 7 sizes, which are now equipped with detachable purifier boxes, now in service, to bring them up to the present standard by substituting the fixed purifier head upon the gas buoy instead of the present arrangement; all of the above to be done free of charge to your department, on condition that you deliver the said buoys F.O.B. Campbell siding, Ottawa. After these changes are made, we will deliver the buoys f.o.b. car at Ottawa, to your order.

*Auditor General wants certificates from agents of buoys delivered.*

November 12.—Auditor General to Deputy: Wants agents' certificates of delivery of buoys. Buoys to value of \$128,500 held in workshops of Willson, although paid for. I have to ask for explanations for having made payment before final delivery.



SESSIONAL PAPER No. 29a

*Forms for keeping records of gas buoys.—1,000 copies Gas Buoy Inspector's report.—40 loose-leaved ledgers, 100 pages each.*

December 4.—Memorandum by J. F. F.: Attached herewith are ruled forms showing requirements necessary for the gas buoy service in connection with keeping records of the same. The undersigned recommends that 1,000 copies of gas buoy inspector's report (Appendix A, attached herewith) be provided, and also loose-leaved books, forty in number, each containing 100 pages, similar to that shown in form B attached; and in addition thereto, 1,000 sheets of the upper half of the last sheet mentioned above.

*Certificates required by Auditor General.*

November 12.—At this date the Auditor General asked for a certificate from each agent, Marine and Fisheries Department, as follows:—

I certify that automatic buoys of type No. 5, type No. 7, type No. 7½, type No. 8½, type No. 9, type No. 11 were received at this station, and that have been placed, and in store (this in addition to the statement already sent him).

It was the middle of December before all these statements were sent in.

*J. F. F. wants to know positions of all Halifax buoys, except No. 6 buoys, to be returned to Ottawa.*

December 13.—J. F. F. telegraphs Hutchins, Dartmouth: Please forward to me at once positions assigned by you to all gas buoys now in Halifax, with exception of No. 6 buoys, to be returned to Ottawa. Urgent.

*Locations assigned to gas buoys sent to Halifax agency.*

December 14.—Hutchins to Agent, Halifax: 'On service, No. 11 buoys: 561, Egg island; 562, Canso; 563, Louisburg; 577, outer automatic, Halifax harbour; 560, Blonde rock, now being placed. No. 9 buoys: 543, Lunenburg; 545, inner automatic, Halifax harbour; 542, Lockport; 540, Little Hope; 541, Brazil rock; 539, Sambro; 504, Yarmouth S.W. fairway; 546, Blonde rock (reported adrift October 10, 1906, and has not since been recovered). No. 7 buoys: 526, Thrum Cap, Halifax harbour; 519, Avon river; 508, Neverfail, Halifax harbour. No. 6 buoys: 558, Middle Ground, Halifax harbour.

At depot:

No. 11 buoys:	564-7, 570-1, 574, 576, 578-85, 589.	17
No. 9 "	538, 547.	2
No. 8½ "	590, 595 (ready to be placed).	2
No. 8 "	506-7.	2
No. 6 "	503 (Cannot identify this with 503 from the records. Should it not be 553?)	1

In all, in depot. . . . . 24

No. 507 is gas and bell buoy brought in from Thrum Cap. The above No. 11 buoys will be assigned the following positions, replacing No. 9 and Courtenay buoys: Inner automatic, Halifax harbour (9), Sambro (9), Lunenburg (9), Little Hope (9), Lockport (9), Brazil rock (9), Yarmouth S. W. fairway (9), Yarmouth N. W. fairway, N. E. shoal, Liverpool, Shelburne, Pubnico, Sheet rock, Liscomb, Isaac's harbour, Whitehead = 16. This will leave us one No. 11 on hand as spare.

7-8 EDWARD VII.,

*T. L. Willson incorporates his business as the International Marine Signal*

December 7.—Thos. L. Willson writes to deputy that he has transferred business as a manufacturer of gas buoys, beacons and other aids to navigation International Marine Signal Co., Limited, who will hereafter carry on the business in his place, including all correspondence, contracts and any obligations ever which he has had or may have with your department. He is the president said International Marine Signal Co., and will personally manage the company so that it fulfils all its contracts and obligations.

*Above change advised to the department's agents.*

December 11.—Deputy writes circular to all the agents of the Marine agencies advising the above change in Willson's business. In view of its being necessary to communicate directly with the manufacturer relative to gas buoy work, all should be addressed to the company mentioned above.

*C. of L. writes the I. M. S. Co. on a project for standardizing all the burners in the gas buoy service.*

December 10.—C. of L. writes to the International Marine Signal Co. to find the time has arrived when it will be possible for the department to standardize all the burners used in the gas buoy service, and settle definitely the patterns made for each size gas buoy. I understand from Mr. Creelman that this matter is being considered by your company and I shall be glad to receive any blue print information which you may have relative to this before the department decides on the size and type to be used.

*Memo. by C. of L. on the subject of gas beacons for British Columbia.*

December 14.—Memorandum by the Commissioner of Lights (to accompany report to Council re gas buoys and beacons for British Columbia). A gas beacon for Dock island, B.C., was supplied by Mr. T. L. Willson for the sum of \$1,325, with illuminating apparatus. This beacon contained, when charged, 1,000 lbs. carbide and with the burners supplied, had sufficient gas for four months. The design number was 5. The latest type beacon is No. 7½, which is quoted at \$1,500 (see October 20, 1906, file 21984-M), which carries 1,500 lbs. carbide and will last with re-charging six months. The price is \$175 more, or 13.2 per cent greater, than the capacity is increased 50 per cent. Before the Lighthouse Board, Captain Troup reported that the Dock island gas beacon was the best light in British Columbia, with the exception of two or three coast lights. The automatic gas beacons are complete in their houses, ready to be set up and put in operation in a few hours.

SESSIONAL PAPER No. 29a

MATERIAL furnished Department of Marine and Fisheries during 1904-5-6 by T. L. Willson.

	Number.	Type.	Serial Number.	Destination.	Value.		
1904.	1	5	501, deep draft.	Prescott	\$ 3,000	\$ 3,000	each
	2	7	2/3.	"	6,000	3,000	"
	1	9	4.	Halifax.	5,000	5,000	"
1905.	1	7 1/2	7.	"	3,750	3,750	"
	2	7	6/508.	"	6,000	3,000	"
	9	6	506, 530/7.	Prescott.	18,000	2,000	"
	12	7	9/520.	Quebec.	36,000	3,000	"
	5	7	521/5.	Levis.	15,000	3,000	"
	1	7	526, special.	"	3,750	3,750	"
	3	5	7/9.	Pt. Arthur	6,000	2,000	"
	9	9	538/43, 515/7.	Halifax.	45,000	5,000	"
	1	9	544.	Pt. du Chene.	5,000	5,000	"
1906.	6	6	543, 551/2, 556/7.	Campb'ltn, N.B.	12,000	2,000	"
	3	6	550, 553, 558.	Prescott.	6,000	2,000	"
	22	11	560/7, 570/1, 574, 576/85, 588.	Halifax.	187,000	8,500	"
	2	11	568/9.	Depot Harbor.	17,000	8,500	"
	2	11	566/7.	Prescott.	17,000	8,500	"
	3	11	572/3, 575.	St. John, N.B.	25,500	8,500	"
	1	11	589.	Levis.	8,500	8,500	"
	2	8 1/2	590, 595.	Halifax.	6,000	3,000	"
	4	8 1/2	591/4.	Sorel.	12,000	3,000	"
	12	8 1/2	596/606, 600.	Levis.	36,000	3,000	"
	5	8 1/2	607/8, 610/12.	Depot Harbor.	15,000	3,000	"
	2	8 1/2	613/14.	Pt. du Chene.	6,000	3,000	"
	3	8 1/2	615/17.	Port Arthur.	9,000	3,000	"
	7	8 1/2	618/19, 620/2, 623/4.	Prescott.	21,000	3,000	"
	3	6	549, 554, 559.	Chatham.	6,000		"
	124		Carried forward.		530,500		

4 buoys, av. \$3,500  
43 buoys av. \$3,221  
77 buoys, av. \$4,987

		Destination.	Value.
	Brought forward		\$ cts. 336,500 00
Dec. 30, 1906.	1 beacon to British Columbia, Nov. 28	British Columbia.	1,325 00
Apl. 4, 1906.	Material and labour on 2 station purifiers.	Sorel and Prescott.	821 75
Mar. 17, 1906.	10 cans purifier		47 50
	Freight account on buoys as rendered.		410 40
June 13, 1906.	4,000 purifiers and 50 cans.	Prescott	212 50
" 21, 1906.	3,666 lbs. chain.	Parry Sound.	117 65
" 21, 1906.	2 connecting links.		3 30
July 6, 1906.	10 cans purifier.		61 25
" 18, 1906.	12 cans purifier.	Sorel	71 43
Sept. 13, 1906.	Canvas chutes.	Parry Sound	52 90
" 22, 1906.	Generator tubes.	St. John, N.B.	1,000 00
Oct. 25, 1906.	500 lb. bell and mechanism on buoy 589	Quebec	1,050 00
	Error account, July 6.		541,703 68 9 00
			541,694 68

MATERIAL furnished Department of Marine and Fisheries during 1904-5-6 by  
Willson—Concluded.

Prescott	12	\$2,000 each	\$ 24,000		
"	10	3,000 "	30,000		
"	2	8,500 "	17,000	\$ 71,000	24 buoys, av. price, \$2,9
Halifax	1		\$ 3,750		
"	1		5,000		
"	4	\$3,000 each	12,000		
"	9	5,000 "	45,000		
"	22	8,500 "	187,000	252,750	37 buoys, av. price, \$6,8
Levis and Quebec	29	3,000 "	\$ 87,000		
"	1		3,750		
"	1		8,500	99,250	31 buoys, av. price, \$3,2
Port Arthur	3	\$2,000 each	\$ 6,000		
"	3	3,000 "	9,000	15,000	6 buoys, av. price, \$2,5
Depot Harbour	2	8,500 "	\$ 17,000		
"	5	3,000 "	15,000		
Campbelltown	6	2,000 "		32,000	7 buoys, av. price, \$4,5
Sorel	4	3,000 "		12,000	6 buoys, av. price, \$2,0
St. John, N.B.	3	3,000 "		12,000	4 buoys, av. price, \$3,0
Point du Chene	1	8,500 "		25,500	3 buoys, av. price, \$8,5
"	2		\$ 5,000		
"	2	\$3,000 each	6,000		
Chatham	3	2,000 "		11,000	3 buoys, av. price, \$3,6
				6,000	3 buoys, av. price, \$2,0
	124			\$536,500	124 buoys, av. price, \$4,
Halifax	1	No. 14 (Mar. 5, '07).	\$ 15,000	15,000	
To March 31, 1907:—					
Victoria	3	No. 11 \$5,500 each	\$ 25,500		
"	3	No. 8 $\frac{1}{2}$ 3,000 "	9,000		
Prescott	27	No. 8 $\frac{1}{2}$ 3,000 "		81,000	
Victoria	16	No. 7 $\frac{1}{2}$ (*) 1,500 "	24,000		
	174			58,500	
				\$691,000	

\*Beacons.

File 27858.

Gas and bell buoys wanted at Yarmouth Bar, Hantsport and Eastern Point Lunenburg—\$11,250. All these required owing to previous errors on the part of the department (C. of L.).

December 17.—Memo. for the Minister: Referring to the attached report of the Lighthouse Board *re* gas and bell buoys for Nova Scotia the undersigned notes that (1) the gas and bell buoy asked for Yarmouth harbour (Hen and Chickens) was passed by the Lighthouse Board, March 31, 1906 (file No. 26230), and that it was stated that a buoy was available for this location. The buoy referred to is at Thrum Cap (No. 7), Halifax harbour, and is in service. (2) The gas and bell buoy for Hantsport was passed by the Lighthouse Board, June 1, 1906. It is noted on the board minutes that a buoy was in stock. This referred to a gas buoy, not a gas and bell buoy, and the former was removed from the Quebec agency, consequently a lighted bell buoy must be provided (file No. 26623). (3) Eastern Point reef. Lunenburg buoy was passed by the Lighthouse Board March 31, 1906, and was stated to be available, which was an error corrected at the time.

SESSIONAL PAPER No. 29a

*Order in Council for new buoys.*

December 11.—Minister to His Excellency in Council: Undersigned recommendations of Lighthouse Board have been considered, and recommends they be authorized:—

	For Ontario—Northport shoal, B. of Q., gas buoy, 8½C. . . . .	\$3,000
	For Prince Edward Island—Miscouche shoal, gas buoy, 8½C. . . . .	3,000
	For British Columbia—	
	Middle Bank, Strait of Fuca, gas buoy, No. 11, with bell. . . . .	9,550
	Sand Head, Fraser River, gas buoy, No. 11, with bell. . . . .	9,550
	Comox Bar, gas buoy, No. 8½, with bell. . . . .	3,750
	Ledger's reef, off McNeill's Point, gas buoy, No. 8½. . . . .	3,000
	One spare gas buoy, with bell, No. 11. . . . .	9,550
	One spare gas buoy, with bell, No. 8½. . . . .	3,750
	Boat Pt., Sarah island, gas beacon, No. 7½. . . . .	1,500
	West Rock, Gulf of Georgia, gas beacon, No. 7½. . . . .	1,500
	Gibson reef, off Gibson, gas beacon, No. 7½. . . . .	1,500
	Zero Rock, Rivers Inlet, gas beacon, No. 7½. . . . .	1,500
	Fog Rock, Fitzhugh Sound, gas beacon, No. 7½. . . . .	1,500
	Morning Reef, Klewnugget, gas beacon. . . . .	1,500
		\$54,150

*Gas buoy or beacon for Northport shoal, B. of Q.*

January 11, 1907.—Deputy to T. L. Willson: Referring to gas buoy or gas beacon intended for Northport shoal, B. of Q., you will receive shipping instructions for this as soon as information can be obtained as to the best shipping route. (Initialled W. H. N.) (Feb. 27, 1907, I. M. S. Co. were instructed to ship this buoy to D.L.H.D. Prescott; initialled J. F. F.)

*Buoy for Miscouche shoal, P.E.I.*

January 11.—Deputy to T. L. Willson.—Referring to gas buoy No. 8½C for Miscouche shoal, P.E.I., you will receive shipping instructions for this as soon as possible.

*No. 11 buoys wanted for St. John agency.*

January 14.—St. John agent to Deputy: Three No. 11 gas and whistling buoys are required by this agency. You will please ship them at your earliest convenience.

*Names of Localities must be given.*

January 21.—Deputy to St. John agent: Your letter 14th, have to instruct you to inform me as to name of locality for which these buoys are intended, in order that application may be submitted to Lighthouse Board for their consideration.

*Four No. 8½C gas buoys shipped from Prescott, to be replaced by others.*

February 19.—Memo.: With reference to the four No. 8½C gas buoys, which were authorized by Order in Council of December 29, 1906, for British Columbia, and which were shipped from Prescott, the undersigned begs to recommend that the I. M. S. Co. be instructed to ship to Prescott four No. 8½C gas buoys to replace those sent to British Columbia.

Victoria Agent calls Deputy's attention to advices he has received from I. M. S. Co. of six automatic gas beacons for certain points enumerated. Wants specific instructions.

February 13.—Victoria agent to deputy: Have to inform you that the engineer of the I. M. S. Co. of Ottawa advises that according to instructions received from  
29a—16

the department six automatic gas beacons had been shipped to the Pacific coast G. T. R. and C. P. R. I notice that these beacons are intended for certain purposes enumerated in Mr. Creelman's letter, and amongst them Gibson's reef, for which I presume Watson's rock is meant. Instructions were received some time ago to purchase a Wigham's 31-day lamp at this point. I beg to be advised whether it is the intention of the department to adhere to the instructions which I have already received, or to establish a gas beacon on Watson's rock. (Answered, J. F. F., 5/3.)

*Halifax writes: Have no spare combined gas and bell buoys on hand—Should have at least four.*

February 19.—C. A. Hutchins, Halifax (approved J. Parsons, agent) calls attention of the department to the fact that we have no spare combined gas and bell buoys on hand here. The Thrum Cap buoy has now been in service eight months and should be changed very shortly, as the carbide will soon be exhausted. We should also have at least one spare buoy at the dockyard. We also require combined gas and bell buoys for the following stations, viz.: Avon river, Hen and Chickens shoal, Lunenburg, and Lunenburg. The spare bell buoy we had here, which was formerly at the Thrum Cap, Halifax harbour, was recently placed off Lahave. We therefore recommend as soon as possible, at least four combined gas and bell buoys. (I recommend cost, \$3,750—J. F. F., 27/2/'06.)

*Correspondence relative to purchase of gas buoys from T. L. Willson.*

February 20.—Memorandum for Minister: Attached herewith are copies of correspondence relative to the purchase of gas buoys from T. L. Willson. The matter is complete, and the undersigned does not see that any additional explanations relative to this matter can be given beyond what is contained in the correspondence.

*Gaskets for carbide doors.*

February 16.—Victoria, B.C., agent, to J. F. F., C. of L.: I beg to requisition the following: Six gaskets for carbide door cover for No. 8½ automatic gas buoys; six rubber gaskets for carbide door No. 7½ beacons. (Recommended, J. F. F., 25/2/'07. F. G., ordered, 28/2/'07—J. F. F.)

*Buoys for British Columbia, two No. 8½, two No. 11.*

January 19.—I. M. S. Co. advises deputy that, as instructed by his letter of January 10, they have shipped to British Columbia two gas buoys No. 11, serial Nos. 626-7.

January 30.—I. M. S. Co. advises deputy that, as instructed by his letter of January 10, they have shipped to British Columbia two gas buoys No. 8½, serial Nos. 628-630.

*Three No. 11 buoys asked for by St. John.*

January 29, 1907.—St. John agent recommends that a No. 11 x 14½ gas buoy be anchored off Southern Wolf Island in place of the Courtenay automatic now anchored there, and the other to replace the Courtenay whistling buoy now anchored off St. John; and the third is for a spare buoy.

*I.M.S. Co.'s buoys endorsed by Amn. Association Masters, Mates and Pilots.*

January 29, 1907.—The I.M.S. Co. send copy of a letter that they received from the Amn. Association of Masters, Mates and Pilots, endorsing the Willson automatic gas buoys.

*Six beacons for Victoria.*

February 5, 1907.—The I.M.S. Co. have shipped 6 gas beacons to Victoria, serial Nos. 4, 5, 6, 7, 8 and 9 (for Boat Pt.; Sarah Island, B.C.; Zero Rock; R.

## SESSIONAL PAPER No. 29a

Inlet; West Rock, Gulf of Georgia; Fog Rocks, Fitzhugh Sound; Gibson Reef, off Gibson, Morning Reef, Klewnugget.

*One No. 11 for Victoria, as spare.*

February 27, 1907.—The I.M.S. Co. have shipped to Victoria 1 No. 11 type automatic buoy, No. 629, gas and whistling, with bell, intended for spare.

*Four No. 8½ for Prescott.*

February 27, 1907.—Deputy instructs I.M.S. Co. to ship to Prescott 4 No. 8½ gas buoys to replace the same number shipped to B. C.

*Five sent Prescott.*

March 4, 1907.—I.M.S. Co. send five No. 8½ gas buoys Nos. 631-5.

*Lightship gas buoy for Blonde Rock.*

March 5, 1907.—Deputy to Halifax agent: Instructions have been given to the I. M. S. Co. to forward to you 1 No. 14 L.S. gas buoy similar to that recently placed in the position of the outer automatic buoy. The buoy referred to above is to be placed at Blonde Rock. It may be some time before delivery can be made of the buoy referred to. (The No. 9 buoy at Blonde Rock went adrift 10th Oct., 1906, No. 546.)

*Unwatched light for Gibson's Reef.—Dept. have no Wigham lights.—Agent to use his own judgment in placing beacons.*

March 5, 1907.—Deputy to Victoria agent: Your letter 13th ulto. I beg to state that the L. H. Board has passed an unwatched light for Gibson's reef off Gibson island. With reference to Watson's rock and the 31-day light, I have to inform you that the department has no Wigham lights available, and as I indicated in a previous letter you are authorized to use your judgment as to the disposition of the gas beacons forwarded to you. You have been requested to forward a complete report as to the number of unwatched lights requested granted, and the means available at your agency for carrying out instructions given. (Initialled J. F. F.)

*Victoria agent remonstrates against sending more buoys than they can take care of.*

March 6, 1907.—Victoria agent to department: That he has lying on the C.P.R. wharf at Vancouver 6 gas beacons and 4 gas buoys, waiting transportation to destination, and the *Quadra* is the only available steamer, and it will keep her engaged for upwards of 2 months. Would recommend that no more buoys be shipped to the coast until we are in a position to place them as soon as they arrive. The department has already been advised on several occasions that present accommodation will not permit the storage of a large shipment of aids to navigation and supplies. (Extract wanted. J.F.F.). I am advised by engineer of I.M.S. Co. of the shipment of 1 No. 11 auto. gas and whistling buoy with 500 lb. bell apparatus, No. 629; marked 'intended for spare.'

*Twelve No. 8½ gas buoys for Prescott.*

March 13, 1907.—C. of L. to assistant C. of L.: Instructions have been given to the I. M. S. Co. to ship to you at Prescott 12 No. 8½ auto. gas buoys. These are to be used by you to replace the Scout type of buoy now in service.

*Nine automatic gas beacons for Victoria (not located).—Six sent 5 Feb. were specially located.*

March 13, 1907.—To agent, Victoria: Instructions have been given to the I.M.S. Co. to ship to you 9 automatic gas beacons complete. The necessary lanterns will be  
29a—16½

7-8 EDWARD VII., A.

forwarded from the Dom. L. H. Depot, Prescott. As you were advised in a letter you are to ship the 4 Wigham lamps at your agency to the L. H. Depot, Prescott, and automatic gas beacons are to be used where required in B. C. w (Initialled J.F.F.)

*Gas beacon already provided for Gibson's (Watson) reef.*

March 14, 1907.—Victoria agent to deputy: Your letter 5th advising that Board had passed an unwatched light for Gibson reef, off Gibson Island, in request to explain that the reef off Gibson Island is named Watson reef on the chart and that a gas beacon is being shipped on board the *Quadra* to be installed on this

*One No. 8½ gas and bell buoy for Victoria.*

March 18, 1907.—I.M.S. Co. have shipped to B.C. one No. 8½ auto. gas and bell buoy, for spare. We have notified Capt. Gaudin of this shipment.

*Seven No. 8½ gas buoys for Prescott.*

March 20, 1907.—Assistant C. of L. Prescott, acknowledges receipt of 5 No. 8½ auto. gas buoys, serial Nos. 631-5; also on 19th March, 2 No. 8½, 637-8.

*'Scout' buoys sent to Halifax to be used as bell buoys, after a sealed ball bell attachment has been provided.*

March 21, 1907.—Deputy to Halifax agent: Instructions have been given to the L. H. Dept. at Prescott to ship to you 15 Scout type gas buoys. These have been condemned by the department and have been replaced in service by No. 8½ auto. gas buoys. They may be used at your agency in place of conical or can buoys with a suitable top; and the department is making arrangements to (have) provide a sealed ball attachment so that the buoys can be utilized as bell buoys. Please advise me the conditions that you suggest making of these. (Initialled J.F.F.)

*Prescott instructed to ship them.*

March 21, 1907.—C. of L. to Assistant C. of L., Prescott: I have to instruct you to ship to the agent of this department at Halifax the 15 Scout type gas buoys which have been condemned by the department as gas buoys and which are to be replaced by No. 8½ automatic type.

*Three No. 8½ gas buoys for Prescott.*

March 21, 1907.—C. of L. to Assistant C. of L.: Instructions have been given to the I.M.S. Co. to ship to you at Prescott 3 No. 8½ auto. gas buoys. These buoys, together with the 12 referred to in my letter of 15th inst., cover the 15 buoys provided for in order in council 11th March, 1907.

*Nos. 5 and 6 buoys called in for alterations, and No. 8 buoys to take their place in great hurry.—Want to know how many by telegraph.*

March 25, 1907.—Deputy (J.F.F.) advises St. John agent that all No. 5 and 6 gas buoys at the agency are to be returned to Ottawa, in order that new heads containing purifier may be placed by the manufacturer, as he has offered to do this free of cost to the department, if the buoys are delivered to him f.o.b. Ottawa. On receipt of this you will reply by wire the number of No. 8½ gas buoys which will be required to replace the Nos. 5 and 6 buoys at your agency. Same thing written to Halifax agent and on 30th March, same thing to Prescott agent.



SESSIONAL PAPER No. 29a

*Thirteen more Scout buoys sent to Halifax—One to be retained for experimenting with bell attachment.*

March 28.—C. of L. to asst. C. of L., Prescott: Referring to my letter 21st instant, instructing you to ship fifteen Scout buoys to Halifax agent, I have to instruct you to ship thirteen additional buoys of this type and retain for the present one buoy for the purpose of having fitted to the same the bell attachment which the department proposes for all buoys of this type. Arrangements have been made to supply the deficiency in the number of gas buoys caused by taking this buoy out of service.

*St. John agent wired what No. 8½ buoys required to replace No. 5 in Restigouche, Miramichi and elsewhere.*

March 27.—J. F. F. wires Harding, St. John, agent: 'Wire number and shipping directions for No. 8½ gas buoys to replace all No. 5 gas buoys, Rivers Restigouche and Miramichi and elsewhere, including spare buoys. Number fives to be returned to I.M.S. Company, Ottawa. (Apparently no answer to this.)

*Thirteen more Scouts for Halifax.*

March 28.—Deputy to Halifax agent: I have to advise you that additional instructions have been given to the L.H. depot at Prescott to ship you thirteen more Scout type gas buoys. These are condemned as gas buoys, and are to be used as either conical, can or bell buoys; and for the latter a special attachment will be provided. (J.F.F.)

*Three No. 5 gas buoys to be sent I.M.S. Co., Ottawa, for alteration.*

March 30.—C. of L. to asst. C. of L., Prescott: I have to instruct you to ship the three No. 5 gas buoys in the Montreal-Kingston division to the I.M.S. Co., Ottawa. The manufacturer has offered to lengthen the tubes and supply new heads containing purifier without cost to the department, provided the buoys are delivered on cars, f.o.b. Ottawa. (See next item.)

*Above buoys (three No. 5) already disposed of.*

April 2.—Asst. C. of L. to C. of L.: Your letter 30th ultimo. I beg to inform you that two of these buoys were shipped on November 2 last along with the No. 7 valveless buoy to T. L. Willson (per copy letter inclosed). The other No. 5 type buoy was shipped to Thames river and is still there (stamped file and return, J.F.F.)

*Halifax will endeavour to utilize discarded Scout buoys.*

March 27.—Halifax agent to Deputy: In partial reply to yours 21st, I beg to say when the buoys are received and cared for we will endeavour to utilize them for some of the many opportunities that our rivers, bays and coast shoals present. Awaiting these buoys and the sealed ball bell attachments.

*St. John agent complains of inattention to his request.*

April 2.—St. John agent to Deputy: Reverting to my letter January 14 last asking to be provided with three No. 11 gas buoys for Split Rock, off South Wolf Island, and the other for a spare buoy, and your reply of February 1 informing me that the matter would be laid before the L.H. Board, I have not received any further information on the subject up to this date (stamped, refer to C. of L.)

*Have no No. 6 buoys, but have three No. 8 with purifiers in lantern supports.—Should have one No. 8½ as spare buoy.—A combined gas and bell buoy should be sent to St. John to replace No. 519.*

April 1.—C. A. Hutchins (approved by Parson, agent); Your letter 25th ultimo, I beg to report that on 8th ultimo we sent to Ottawa two No. 6 gas buoys in accordance

with previous instructions. We have no more on hand. We have on hand at the agency two No. 8 gas buoys in the dockyard—Nos. 506 and 8 and one No. 8 at present in St. John—No. 519 to be replaced off the Avon river, as soon as the ice disappears. Those three buoys have the purifiers in the lantern support. The two No. 6 already returned were brought in from the Middle Ground and Neverfail, Halifax harbor, having been replaced by No. 8½ buoys. We should have at least one No. 8½ buoy on hand as spare to relieve Middle Ground and Neverfail. I beg to ask if we shall send the No. 8 buoys, 506-8 and 519 to have purifiers fitted in heads of buoys. A combined light and bell buoy should be sent to St. John to replace No. 519 for Avon river. This buoy is attended to by the *Lansdowne* from St. John.

*New power derrick scow for B.C.—Want a report on what boats are available for chartering meanwhile.*

March 20.—Deputy to Victoria agent: Your letter, 6th, with reference to lack of facilities for handling aids to navigation in your agency, I have to advise you that plans are being prepared and tenders will be called for the construction of a power derrick scow for B.C. waters. While it may take some time for the construction of the scow you are directed to forward to me a report indicating what boats are available and may be chartered for the purpose of placing gas buoys and other aids to navigation that may be forwarded to you. The department recognizes that the *Quadra* is unable to overtake the work as it stands now in B.C., and pending the furnishing of permanent appliances it is necessary that other steps be taken. Your early attention to this is requested. (Initd. J.F.F.)

*Purifier felts wanted for Halifax.*

April 15.—C. A. Hutchins to Halifax agent: Will you please order from Ottawa for immediate delivery one dozen purifier felts for No. 11 gas buoys—i.e., one dozen tops and one dozen bottoms. (Letter sent, I.M.S. Co., 22-4-07.)

*Freight on buoys.*

April 22.—W. Thomson, freight agent G.T.R., Ottawa, to C of L.: I attach duplicate accounts for four cars of buoys delivered to the I.M.S. Co. You advised that you would pay freight charges on these cars. Please let me have cheque by return mail oblige.

*Charlottetown notified by I.M.S. Co. of shipment of three No. 8½ buoys.*

April 26.—Charlottetown agent to deputy, telegram I.M.S. Co., date 23rd instant, notifies me of the shipment three gas buoys No. 8½—one for Miscouche shoal, Indian rocks and Pt. Prim. What about buoy instructed get from Pt. Prim which I have asked agent to send Pictou. (Telegram sent, A.O.C. 27-4-07.)

*No. 9 Lighted Whistling buoy for Pt. Prim.*

April 27.—Deputy replies: The agent at Halifax received instructions to supply No. 9 lighted whistling buoy complete for Point Prim. You will correspond with him.

*Quotation wanted for bell attachment to Scout buoy.*

April 30.—C. of L. to asst. C. of L.: I have to request you to furnish me with full report as to the conditions obtaining at the mouth of the river Thames, and advise if there is sufficient water to replace the No. 5 buoy now in service by a No. 8½. I propose shortly to visit this locality, but in the interval require the report referred to above.

*Quotation wanted for bell attachment to Scout buoy.*

May 6.—Deputy to I.M.S. Co. Be good enough to quote bell attachment to Scout type gas buoys which have been withdrawn from the service, and which are to be converted into bell buoys for the maritime provinces. (Quotes \$474 each.)

## SESSIONAL PAPER No. 29a

*Arrange for bell apparatus to be used with discarded Scout buoys.*

May 7, 1907.—I.M.S. Co. to Deputy: Your inquiry of 6th received re bell attachment for Scout type of gas buoy. We can supply our patent sealed ball type of bell apparatus for these buoys with 4-inch diameter hard steel balls and 200 lbs. bronze bells complete, including the required pedestals for the heads of the buoys, for the price of \$474 each: F. O. B., Ottawa. We have one of these apparatus ready which we could ship you immediately on receipt of the order. (Written across upper left corner: 'I recommend that one bell attachment be purchased and tested first at Prescott, and later at Halifax. Cost \$474 plus freight, J. F. F., 7-5-07.') (Approved, F. G. Attachment ordered to be shipped to Prescott, J. F. F., 10-5-07. Letter to Prescott, 10-5-07. J. F. F.)

*Deputy now inquires about St. John Buoys, instead doing what agent wanted.—  
(Notice the delays.)*

May 8, 1907.—Deputy to St. John agent: Your letter 2nd April referring to your former letter 14th January, asking for three No. 11 gas buoys, I have to request you to be good enough to forward to me a list of the gas buoys, which have been sent to you for the Bay of Fundy, and the positions in which these buoys have been placed, together with any recommendations which you may have for additional automatic buoys for your agency.

*Depth of water at mouth of Thames river—14 feet No. 8½ buoys draws 9 feet.*

May 3, 1907.—Asst. C. of L. to C. of L.: Your letter 30 ult.: 'From the report of Fitzpatrick when this buoy was first placed he states there is 14 feet water on both sides of the buoy for 200 feet. I observe also that in draft notice to mariners which I sent on 23rd July, 1906 (copy inclosed), the draft of water is also given as 14 feet. Consequently a No. 8½ buoy will be quite suitable for this depth of water. Although with a draft of 9 feet there will not be very much to spare. (See letter, 7th May, J. F. F., 10-5-07.)

*Place No. 8½ buoy and send No. 5 to I. M. S. Co., Ottawa.*

May 7, 1907.—C. of L. to Asst. C. of L.: I have to instruct you to replace the No. 5 gas buoy at River Thames by a No. 8½ gas buoy, and have the No. 5 buoy shipped to the I. M. S. Co., Ottawa: Please advise me when this is carried out and no draft notice to mariners will be required.

*No number 8½ available.*

May 8, 1907.—Assistant C. of L. to C. of L.: Your letter 7th received, and your instructions will be duly attended to. I may state, however, that there is no No. 8½ buoy available at the present moment.

*Use one from Montreal-Kingston division.*

May 10, 1907.—C. of L. to Assistant C. of L.: Your letter 8th. I have to instruct you to utilize one of the No. 8½ gas buoys for the Thames river which were intended for the Montreal-Kingston division, and replace the same by a shallow draft spar gas buoy, compression type.

No. 16 replies 13th May and says your instructions will be carried out as early as possible.

*Ball attachment for Scout Buoy to be tested.*

May 10, '07.—C. of L. to Assistant C. of L.: Have to advise you that a ball attachment for 'Scout' buoys has been ordered from the I. M. S. Co., to be shipped to the Dom. L. H. Depot, Prescott. I have to request you to have this tested, and send a

7-8 EDWARD VII.

report to the department. (This letter also acknowledged 13th May, and will be attended to.)

*Tribute of efficiency of automatic gas buoys in B.C., by 2nd officer, C.P.R. 'Tartan.'*

May 11, 1907.—T. L. Willson submits a letter of the 2nd officer of the *Tartan*, C.P.R. steamer, showing his appreciation of the self-regulating acetylene buoys, &c. This was crossed 'Should the Minister see this? J. F. F.' and 'The Minister has seen it, C. S.' This letter was addressed to the Willson Carbide Co., Catherines, and referred to Willson, Ottawa.

*Buoy supplies for Quebec.*

May 11, 1907.—I. M. S. Co. to Deputy: As instructed your letter 19th May, shipped to J. U. G., Quebec, 12 cans of acetylene purifier; 12 complete sets of gaskets for No. 7 gas buoys and 12 complete sets for No. 8½ gas buoys.

*Buoy supplies for Halifax.*

May 13, 1907.—Deputy to I. M. S. Co.: Ship to agent this department, 24 gaskets for valve at lower end of gas buoys, 24 gaskets for purifier, 24 gas carbide door, 50 ¾-inch brass split cotter pins for water valve. Shipment shipped by express. (Shipped by express, 17th May. Account sent Halifax for freight, 18-5-07, J. F. F.)

*Spare gas and bell buoy required for Halifax, cost \$3,750, No. 689.*

May 7, 1907.—Deputy to Gov. in Council wants authority to purchase from I. M. S. Co., 1 combined gas and bell buoy to be held at Halifax as a spare as the one previously provided for this purpose has been placed at the mouth of the Have river, as it is necessary that at least one buoy of this class be held in reserve.—Shipped 21st May.

*Station purifier wanted.*

May 15, 1907.—Deputy to I. M. S. Co.: Please quote price for one station purifier similar to the two previously furnished by you and shipped to Prescott.

*Only three Pintsch Buoys now in service—Want them abandoned.*

May 15, 1907.—Memorandum of 12th April again submitted (by J. F. F.) is as follows: The only Pintsch gas buoys which now remain in the service of the department are three gas and bell buoys in the Quebec agency, viz., at Barrett Channel Patch and Beaujeu Bank. For these three buoys and the gas buoy at Beaujeu Bank pier the department is compelled to keep up a Pintsch gas plant at Quebec. Relative to the gas buoy service the policy of the department has been consistent in the past—to replace Pintsch gas buoys by acetylene lighted buoys for reasons which have been set out in the last three annual reports of the department. The replacing of the Beaujeu bank beacon by a suitable light will relieve the department of the expense of maintaining the Pintsch gas plant at the Quebec agency.

*One No. 8½ gas buoy for Sturgeon Bank, B.C.—\$3,000.*

May 14, 1907.—Minister to Governor in Council: 'Undersigned recommends to be authorized to procure from I. M. S. Co., one No. 8½ C gas buoy at a cost of \$3,000 to be placed at the elbow of Sturgeon Bank, B.C. (Initialled J. F. F.)

I. M. S. Co. instructed to ship this buoy only on 21st June. It was shipped 26th June.

*One station purifier for gas and derrick scow for Parry Sound.*

May 20, 1907.—I. M. S. Co. to Deputy: Your letter 15th. Will supply one station purifier for acetylene gas similar to the two previously furnished by us for f.o.b. cars, Ottawa. (Endorsed. This is required at once for gas and derrick

SESSIONAL PAPER No. 29a

building for Parry Sound. Cost, \$500. 23-5-07. Approved F. G. Ordered 8 June, J. F. F.)

This purifier was not shipped until 30th October. (See file at that date.)

*I. M. S. Co.'s report re testing of their Pintsch gas lanterns.*

May 20.—Commissioner of Lights to Assistant Commissioner of Lights, Prescott: I inclose for your information copy of a report received from the I. M. S. Co. re testing of their Pintsch gas lanterns.

Report missing.

*Supt. of Lights reports on towers of No. 11 gas buoys.*

May 20.—Commissioner of Lights to I. M. S. Co.: I inclose for your information copy of a report received from the superintendent of lights, Halifax, on the towers for the No. 11 gas buoys.

Report missing.

*Gas buoys received at New Brunswick agency.*

May 23.—Gas buoys received at N. B. agency:

Type No.	Serial No.	Where placed.	When placed.	Description.
11	572	Old Proprietor.....	21 Apl, '07.....	Fixed white gas and whistling.
11	5	Broke adrift from Old Proprietor. Ashore at Tusket Isld.		
11	3	North W. li .....	30 Jany, '07.....	Occulting white gas and whistling.
11	664	Point Lepreau.....	9 May, '07.....	Occulting white gas and whistling.
11	3	Anchored in Carleton to be placed N. W. Brier Island.		
11½	589	Anchored in Carleton to be placed S. W. Brier Island, spare buoy, 11th Oct. '07.		
9½	698	1 mile off Partridge Isld.	11 May, '07.....	Occulting white gas and whistling.
7	519	Foul ground .....	22 Dec., '07.....	Occulting white gas and whistling.
7	5	Avon River .....	16 Apl, '07.....	Occulting white gas and whistling.
8½	520	Gas and bell, spare buoy at ballast wharf St. John N. B., spare buoy.		
8	674	No. 9 spare buoy at ballast wharf, St. John, N.B. spare buoy.		

*Miramichi River Service.*

- Three No. 6 buoys shipped Ottawa, replaced by type No. 8.
- No. 8 655 At Fairway, 17 May, '07, occulting white.
- 8 6 At Dredge, 17 May, '07, occulting white.
- 8 2 Spare buoy at Chatham, N.B.

*Restigouche River Service.*

- Six No. 6 buoys shipped Ottawa, replaced by type No. 8.
- No. 8 Fullerton's Bar.
- 8 Point La Limb.
- 8 Point Le Garde.
- 8 Oak Point.
- 8 Traverse.
- 8 Spare buoy at Campbellton, N.B.
- 8 To be placed Zephyr Rock, off Pt. Duchene, N.B. This buoy is in Charlottetown, P.E.I.

7-8 EDWARD VII., A.

*T. McAvity & Sons, St. John, N.B., after business with the I. M. S. Co.*

June 1, 1907.—T. McAvity & Sons, St. John, N.B., to Minister: The Willson Buoy Company, who supply a large number of gas buoys to your department, a considerable number of 10" and 12" whistles (steam) which are of American make and imported from Cincinnati; also a number of bells, which are imported from Troy, N.Y. We would ask you if you would kindly drop them a line requesting you to merely give us the preference on these two items, viz., whistles and bells. We guarantee to give them equally as good articles in every respect. By doing this we will confer a favour on yours truly, T. McA. & Sons.

*Carload of No. 5 gas buoy: to be returned to Prescott.*

June 19.—Commissioner of Lights to I. M. S. Co.: Have to request you to return immediately to the D.L.H. Depot, Prescott, one carload of the No. 5 gas buoys which were sent to Ottawa to have the tubes lengthened and new purifying head attached.

Specifications on file here for No. 7 automatic gas buoy; also additional specifications required for No. 9.

*Acetylene gas purifier sent to Victoria, evidently without being ordered.*

May 31.—Victoria Agent to Deputy: 'I inclose herewith certified invoices for the following:—20 cans acetylene gas purifier containing 1,687 lbs., 20 cans for a total of 25 top felts for purifiers, 25 bottom ditto, received from I. M. S. Co. (Accounts certified and forwarded for payment. J. F. F.)

*Circular to all agencies showing types and numbers of buoys shipped them.*

June 7.—Deputy (per C. S.) to all 6 Agencies of Department: 'I am sending to you, under separate cover, for your information, a blue print, sheet No. 769, showing the various types of aut. gas buoys, together with serial numbers of the buoys which have been shipped to various agencies by this department. (Initialled J. F. F.)

*No. 9½ imported type now furnished by Department.*

June 10.—Assistant Commissioner of Lights, Prescott, to Deputy: Acknowledging receipt of your letter 7th inst., in which you inform me that you are sending under separate cover, blue print, sheet No. 1001, giving the governing dimensions of the latest type No. 9½ aut. gas and whistling buoy which is provided by this department, and which carries an adjustment for submarine bell. (Initialled J. F. F.)

June 14.—Similar letter from Victoria agent, dated June 14.

June 11.—Assistant Commissioner of Lights to J. F. F. Acknowledging letter of June 10, advising shipment carload of No. 5 buoys which were sent to Ottawa to have their tubes lengthened and new purifying heads attached.

*One dozen bronze bolts shipped to each agency of department, evidently without being asked for.*

June 11.—C. S. for Deputy: Orders I. M. S. Co. to ship the following:—1 dozen bronze stud bolts for carbide doors, Nos. 8½, 9½ and 11 gas buoys, to the following agents of this department:—Victoria, B.C.; Parry Sound, Prescott, Quebec, St. Charlottetown, P.E.I.; St. John, N.B.; Halifax, N.S.; accounts for same to be rendered to agents. (Initialled J. F. F.) Shipped June 18.

*Communication with Trinity House, London, as to the department's experience with automatic low-pressure acetylene gas buoys.*

June 13.—Deputy to Secretary, Trinity House, London: There are at present in Canadian waters 201 automatic low-pressure acetylene gas buoys, which have

## SESSIONAL PAPER No. 29a

obtained for this department from the I. M. S. Co., of Ottawa. The following table gives the number of each type of buoy referred to above, together with the value of the same.

		Av.
143 standard gas buoys. . . . .	\$105,000	\$ 2,832
8 No. 8½ gas buoys, with bells. . . . .	30,000	3,750
46 gas and whistling buoys. . . . .	347,000	7,543
3 No. 11 gas and whistling buoys, with bell. . . . .	28,650	9,550
1 No. 14 gas and whistling buoy. . . . .	15,000	15,000
	\$25,650	

In addition to the above, the department has in service 18 aut. low pressure gas beacons, which operate on the same principle as the gas buoys, viz.: 1 No. 7 beacon, which carries a charge of 1,000 lbs. carbide, and 17 No. 7½ beacons, which carry charges of 1,500 lbs. each and cost the Dominion \$1,500 each, F.O.B. Ottawa.

*Information about Automatic Gas Buoys in the Canadian Service given to Trinity House, London.*

These are in use on the Pacific coast. The No. 7½ gas beacons and all the gas buoys referred to above, are furnished to the department at the cost mentioned, exclusive of lanterns. The bell attachment for the buoys is of a special type. The bell is struck by a steel ball rolling in a tube the outer end of which is closed and the inner end covered by a corrugated bronze diaphragm. By this means the rolling ball is not affected by atmospheric conditions. The experience of this department shows that the lighted whistling buoys which have been supplied by the I. M. S. Co. are superior to the Courtenay whistling buoys heretofore in service, inasmuch as the area of the whistling tubes is greater. This department has had in its service compression gas buoys, using both Pintsch and acetylene gas. The Pintsch gas buoys have been discarded by the department and the acetylene high pressure buoys are being replaced as rapidly as possible by automatic gas buoys of the type manufactured by the I. M. S. Co. I have pleasure in sending you under separate cover copies of the annual reports of this department for the years 1904-5 which contain certain information with reference to the gas buoy service of Canada.

*Test of 'Scout' Buoy Bell Attachment.*

June 18.—J. F. F. telegraph to W. H. N., Prescott: 'Advise me when you will complete test of Scout type bell buoy. (Apparently no answer.)'

*I. M. S. Co.'s Book of Instructions for Assembling and Charging Automatic Gas and Whistling Buoys.*

June 18.—Commissioner of Lights' circular to agencies: Victoria, Halifax, St. John, Parry Sound, Chatham, Montreal, Quebec, Prescott. 'Am sending you under separate cover a book of instructions issued by the I. M. S. Co., for assembling and charging automatic low pressure gas buoys. I desire to call your special attention to a paragraph on page 5 as follows: 'Replace the carbide door with its rubber packing. The surface on which this packing rests must be perfectly clean. Be careful to screw the bolts down evenly, so as to avoid having the packing tighter on one side than on the other. The attention of the department has been directed to the necessity of having special attention paid to the paragraph mentioned above, inasmuch as two cases of stud bolts have been broken by screwing the carbide door down unevenly. Please see that the officers who are charged with the placing and maintaining of automatic gas buoys have this brought to their attention, and advise me when it has been done.'

*Gas Buoy Shipped before Order in Council Providing for it was Obtained.*

June 21.—C. S. (for deputy) orders I. M. S. Co. to ship Gregory 1 Standard No. 8½ gas buoy for Fly Bank (initialled, J. F. F.)

On this file under date July 10 is the following:—Clerk P. C. On a memo. dated June 13, 1907, from the acting Minister of Marine and Fisheries, stating that representations have been made to him by the agent Marine and Fisheries, Quebec, that it is in the interests of navigation that a gas buoy be established on the eastern end of the Fly Bank. The minister therefore recommends that authority be given to him to procure a No. 8½ gas buoy from the I. M. S. Co., at a cost of \$3,000. The committee advise that the required authority be granted.

*3 No. 8½ Buoys for Quebec.*

June 21.—C. S. (for deputy) instructs I. M. S. Co. to ship to Gregory three No. 8½ gas and bell buoys for Barrett Ledge, Channel Patch and Beaujeu Bank (Shipped June 26, account certified and forwarded for payment, 28/6/07, J. F. F.).

*Sundry Expenses I. M. S. Co.*

June 22.—I. M. S. Co. to J. F. F., Commissioner of Lights: We inclose herewith invoices in triplicate for services and expenses of our Mr. Garry to Quebec in March and April and to Owen Sound and Parry Sound in May.

June 24.—Deputy to I. M. S. Co.: Department will not pass above expense bill without a voucher for hotel expenses.

*Tobin Bronze Stud Bolts received at Victoria.*

June 27.—Victoria agent to I. M. S. Co.: 'Please find attested receipt in triplicate for 1 doz. Tobin bronze stud bolts for carbide door of automatic gas buoy.'

*Commissioner of Lights wants 10 No. 9½ Gas and Whistling Buoys sent to Victoria, B.C., nothing of the kind asked for.*

June 28.—Memorandum (by J. F. F.). In view of the increase of shipping and the necessity of additional aids to navigation in British Columbia waters, the undersigned has the honour to recommend that 10 No. 9½ lighted whistling buoys be procured from the I. M. S. Co. at a cost of \$5,000 each, and shipped by the department to the agent at Victoria, B.C. Signed, J. F. F. Initialled, W. T.

*I. M. S. Co. propose a Swap of Buoys, 2 No. 9½ for 1 No. 11 (the latter now at Prescott as a spare). Giving the Department much Trouble but no Compensation.*

June 28.—I. M. S. Co writes thus: We beg respectfully to ask your kind attention to the following matter, and we shall be very glad if you can see your way clear to accept our proposition. We have an inquiry from the government of Brazil for a No. 11 lighted whistling and bell buoy, which may require to be shipped almost immediately to Para, Brazil. Unfortunately we have no No. 11 buoys of this type in stock, and it would take us a few months to manufacture one. We understand that there is now at the Lighthouse Depot in Prescott one of these buoys which has been considered as a spare, and we would like to know if you would be good enough to allow us to have such buoy, and to let us replace it by two of our No. 9½ lighted whistling buoys. The price paid by your department to us for the said No. 11 buoy was \$9,550. Our price for the two No. 9½ buoys which we offer instead of the No. 11 would be \$10,000, so that there would only be a difference of \$450 to be paid to us, and you would get two buoys in exchange for one. Trusting that you will be able to meet our wishes in the matter, and thanking you in anticipation. (Endorsed on upper left corner. 'See memo. attached with draft report to council.' J. F. F.)



## SESSIONAL PAPER No. 29a

*Department Evidently willing to make Swap, would even seem to be Anxious to do so.  
Memorandum for Deputy Minister—19 July.*

Attached herewith is a letter from the I. M. S. Co., requesting that they be allowed to take back the No. 11 lighted bell and whistling buoy shipped to this department as a spare buoy for the Parry Sound division furnishing the department in lieu thereof 2 No. 9½ lighted whistling buoys. The undersigned recommends that the necessary authority be procured by order in council, and if approved, a draft notice to council is attached. (Initialled J. F. F.) (In red ink 'Accountant to say if expenditure can be met. F.G.' 'Prepare O. C. F.G.')

*Two 8½ standard gas buoys for Detroit river, Amherstburg, \$4,000.*

June 21, 1907.—Acting minister to Gov. in Council: Representations have been made to the department as to the necessity of providing 2 buoys for the Limekiln crossing near Amherstburg, to be used during the progress of the dredging at that point. The channel referred to is one of the greatest importance and is used by all traffic bound up and down the Detroit river. The undersigned therefore requests that authority be granted to order 2 No. 8½ standard gas buoys from the I.M.S. Co. at a price of \$3,000 each. (Initialled J. F. F.) Above passed council 10th July.

*Auditor General asks for statement from each agency of all buoys received from T. L. Willson or the I.M.S. Co., and what disposition has been made of them.*

July 4, 1907.—A.G. to deputy: I wrote you some time ago asking for a statement from each of the agencies of the department, showing the number of gas buoys received from Mr. T. L. Willson and the disposition which had been made of them, but so far I have not received a reply. These statements I deem necessary to a proper audit of your expenditure in connection with the gas buoys purchased from Mr. Willson, and I shall be obliged if you will cause them to be sent me at your early convenience. Of course I shall expect now that the statements will include all gas buoys received up to March 31, 1907, whether from Mr. Willson or the I.M.S. Co. You will have noticed that the order in council recently passed authorizing the purchase of these buoys, assigns a particular location to each, so that in the absence of the information which the statement I ask for should supply, I am not in a position to report whether or not the directions of the Gov. Gen. in Council have been carried out?

*Statement being prepared.*

July 9.—C.S. (for deputy) writes to the A.G. that the statement asked for by letter of 4th July is being prepared.

*I.M.S. Co. asked for cost of explosive bell for gas beacon decided on for Helen Point Active Pass.*

July 6, 1907.—At the last meeting of the L. H. Board, and after a personal inspection by the minister and several of the members thereof, a recommendation was made which has since been approved, that a gas beacon with explosive bell be provided for Helen Point Active Pass. I may state that the department has before it no official information from your firm as to the cost of the explosive bell referred to, over and above the cost of the gas beacon. Please be good enough to let me have this information.

*Ten No. 9½ buoys for British Columbia—\$50,000.*

July 4, 1907.—Acting Minister M. & F. to Gov. in Council: In view of the increasing trade in B. C. waters and the necessity of provision being made for further aids to navigation, the undersigned has the honour to recommend that he be authorized to procure from the I.M.S. Co. 10 No. 9½ lighted whistling buoys at a cost of

\$5,000 each. (Initialled J.F.F. per W.H.N.)' (Above recommendation passed c 10th July).

*One Standard gas and bell buoy for Queen Charlotte Island—\$3,750.*

July 4, 1907.—Acting minister M. & F. to Gov. in Council asking authority to procure from I.S.M. Co. 1 standard gas buoy for Skidegate Harbour, Laxenburg Queen Charlotte Island, at a cost of \$3,750. The above-mentioned aid to navigation has been recommended by the L. H. Board of Canada.

(Above recommendation passed council 10th July).

*Blue prints for No. 9½ buoys to be sent to Victoria.*

July 19, 1907.—J. B. H. for deputy to I.M.S. Co.: 'I have to request you to furnish Capt. J. Gaudin, agent M. & F. Dept., Victoria, with 3 blue prints giving weight and governing dimensions of No. 9½ gas buoys. (Initialled J.F.F.)'

*One No. 11 auto. gas and whistling buoy sent from Prescott to I.M.S. Co., N.S.*

July 19, 1907.—Asst. C. of L., Prescott, to I.M.S. Co.: 'I have sent you by G.T. flat car to your address, charges collect, one automatic gas and whistling No. 11 type, serial No. 586, without superstructure, one box wrenches and one wrench. (Stamped file; no action.—W.H.N.).'

*Victoria agent advised of ten No. 9½ buoys to be sent him, with blue prints.—L.H. Board to go forward in due course.*

July 19, 1907.—J. B. H. for deputy to agent M. & F., Victoria, B.C.: 'Instructions have been given the I.M.S. Co. to ship to you 10 No. 9½ lighted whistling buoys for B. C. waters. I have to instruct you to forward to me, after consultation with Mr. Troup, a list of the points where these buoys are most urgently required. The I.M.S. Co. has been instructed to forward to you a blue print giving the governing dimensions of the buoys referred to. Lanterns for these buoys will be forwarded to you in due course. (Initialled J.F.F.)'

(Five of these shipped July 24th, 708-712, and five July 26th, 713-717.)

*Proposed swap and explanations regarding same submitted to Privy Council.*

July 29, 1907.—Memo. (by J.F.F.) acting minister M. & F. to Gov. Genl. The undersigned has the honour to report that the department purchased from the I.M.S. Co. 1 No. 11 lighted whistling and bell buoy as a spare buoy for the Georgian Bay district, at a cost of \$9,550; that the buoy referred to was shipped to the L. H. Board at Prescott to be conveyed to the Georgian Bay by the gas and derrick scow construction at Prescott, and intended for the Parry Sound district. Representations have been made to the undersigned by the I.M.S. Co. that they require for the district 1 No. 11 lighted bell and whistling buoy, and ask that the department return to them the buoy referred to above and accept in lieu thereof two No. 9½ lighted whistling buoys which cost \$5,000 each. It has been reported to the undersigned that the No. 9½ type lighted whistling buoy was not available at the time that the No. 11 buoy was purchased by the department, and that the No. 9½ type will meet all the requirements of the department. The undersigned has the honour to request that he be authorized to make the exchange referred to above and to pay the difference in price, viz., \$4,550.

*Swap approved by Council.*

August 1, 1907.—The above was approved by the Privy Council.

## SESSIONAL PAPER No. 29a

*Victoria agent consults Captain Troup about placing buoys.*

July 26.—Victoria agent to Deputy, advising that he was in communication with Capt. Troup with reference to the placing of these buoys where they are most urgently required. These are the ten No. 9½ buoys.

*Accounts for buoys coming in from I. M. S. Co., giving no information as to where they were used.*

July 30, 1907.—A. G. T., Assistant Accountant to J. F. F., D. L. H. Depot, Prescott: I am putting through to-day some accounts received from the I. M. S. Co. amounting to a large sum, and as we have no particulars as to the places the buoys are being sent to, we are obliged to charge the whole to general account. As this is not absolutely satisfactory I have to request you to forward to me at your earliest convenience a list of the various places for which these buoys were purchased so that we may distribute the charge in our books.

*Victoria Agent in communication with Captain Troup about placing buoys.*

July 26, 1907.—Victoria Agent to Deputy. Your letter 10th advising 10 No. 9½ buoys, also to forward me a blue print giving plans and dimensions of these buoys. I am in communication with Captain Troup with reference to the placing of these buoys where they are most urgently required.

*Captain Troup wants to hear from Captains in Coasting Trade before deciding to place buoys—No additional buoys to be sent British Columbia meantime—Wire best arrangements you can make for handling these buoys.*

July 30, 1907.—Victoria Agent to Deputy: I beg to inform you that Captain Troup has been away on a trip to Alaska, on board the C.P.R. steamer *Princess Royal*, returning yesterday. He leaves for Montreal to-morrow, and requests that the question of placing these buoys be left in abeyance until his return in about ten days, in order that he may obtain a report from the captains engaged in the coasting trade. I beg to acknowledge your telegram of this date: 'No additional buoys beyond the ten lighted whistling buoys shipped you, will be forwarded to B.C. until further arrangements made for additional facilities. Wire best arrangements you can make to charter suitable tug to place number lighted whistling buoys and to tow scow. If more assistance than tug required can you charter any suitable steam barges for the outside work.' The I. M. S. Co. has forwarded me three drawings governing the dimensions of the 9½ lighted and whistling buoys. (Stamped—Refer to C. of L., 7th August, 1907.)

August 7, 1907.—Department to I. M. S. Co.: Labour and material loading, one No. 11 buoy, \$34.68.

*Deputy calls Agent's attention to necessity of keeping sufficient number of spare buoys.*

August 8, 1907.—Deputy to Victoria Agent: Your letter 30th ult. in which you advise me that you wish to await Captain Troup's return before sending to me a list of the points where the ten lighted whistling buoys should be placed. I beg to call your attention to the necessity of your keeping a sufficient number of these for spare buoys. Please be good enough to let me have the list referred to at the earliest possible moment. Please note also that I will require a report from you as to the general facilities which you may need for placing and maintaining the new aids to navigation supplied to your agency. The report should be clear and any recommendations made should be specific.

(Practically an invitation to order new requirements and to be decided about it.)

*I. M. S. Co. notified that proposed exchange of buoys has been authorized.*

August 13, 1907.—Deputy to I. M. S. Co.: I have to acknowledge receipt of letter of 28th June re exchanging one No. 11 gas buoy, for you giving two No. 9½ aut. and whistling buoys, the difference of \$450 to be paid by the government. In reply I beg to inform you that authority is given to return to you the No. 11 lighted whistling and bell buoy, and I have to instruct you to ship to the L. H. Depot, at Prescott, for transmission to Parry Sound Depot, two 9½ lighted whistling buoys, and credit against the account the price paid by the department to you for the No. 11 lighted whistling and bell buoy.

*Freight on buoys.*

August 16, 1907.—Wm. Thomson, Freight Agent, G.T.R. to Deputy: On July we received from Chatham, Ont., one gas buoy delivered to the I. M. S. Co. freight charges on which were \$101. I. M. S. Co. inform me that these charges are payable by you. Will you kindly let me have your cheque at your earliest convenience.

*Two No. 9½ buoys sent to Prescott.—(Who paid the freight?)*

August 17, 1907.—I. M. S. Co. to Deputy: 'As directed by you under date of 13th August we have shipped by G.T.R. to W. H. N., Prescott, two No. 9½ aut. and whistling buoys, Nos. 718 and 9 in exchange for the No. 11 aut. gas and whistling buoys taken over from your department. Inclosed B. L. invoice and credit, covering the above shipment. (File and return, J. F. F., 19-8-07. Accounts sent Prescott 10-9-07.)

*About spare buoys in British Columbia: one No. 11, four No. 9½, one gas buoy, one aut. and bell buoy.*

August 17, 1907.—Victoria Agent to Deputy: Yours 8th inst. calling my attention to the necessity of keeping a sufficient number of buoys for spare ones, and in reply beg to inform you that after the Swiftsure Bank and the Sand Heads buoys have been installed we shall have one spare No. 11 buoy in readiness for relief. The other buoys are only placing six of the No. 9½ and will have four to spare. We have also one No. 11 to spare of the gas and combined gas and bell buoys. (Stamped file—No. 3-9-07, J. F. F.)

*Deputy wants to know when the two 9½ buoys for Parry Sound will reach their destination.*

August 19, 1907.—Deputy to J. F. F., Prescott: 'With reference to the order of council of 1st inst. approving of the purchase of two buoys for Parry Sound I am to request you to inform me when you expect that these buoys will reach their destination?'

*Exchanged buoys have now to be shipped by rail to Parry Sound—Expense no objection. The Commissioner of Lights suggesting this if required.—(This by the Commissioner chiefly responsible for the whole thing)—Shipped 17th August.*

August 21, 1907.—J. F. F., Prescott to Deputy: Your letter 19th inst., I beg to state that it was the intention to send these buoys to Parry Sound on the gas derrick scow now under construction at Prescott. I returned from Montreal yesterday after having seen the contractor for the machinery and derrick, and I find that little progress has been made that it will be late in the fall before the scow can be launched into the Georgian Bay. If the delivery of the buoys is required before this I would recommend that the cars be not unloaded at Prescott, but re-routed to Depot Harbour. (Written across—send by freight, F. G.)

SESSIONAL PAPER No. 29a

*Buoys to go by freight, too late for re-routing.*

August 28, 1907.—Deputy to C., of L., Prescott: Your letter 21st. 'I have to inform you that it is considered desirable that these buoys be sent by freight. I understand that Mr. Noble has telephoned you to this effect.—(Initialled W. H. N.)

*All No. 5 buoys now changed, except five and one No. 6.*

September 12, 1907.—I. M. S. Co. to J. F. F., C. of L.: As instructed by you, 1st August, we have finally shipped to you all the gas buoys which you had sent us for alterations, including the No. 7 valveless, to which we had to fit a new lantern support, owing to the original not being returned to us with the buoy. We note that you have not yet returned to us for alteration five of the type No. 5 buoys, serial numbers 505, 530, 1, 2, 4 and also one No. 6 buoy, serial number 550. As these latter buoys were originally shipped to Prescott we presume that these are the buoys which are still at Parry Sound.

September 25, 1907.—C. of L. to I. M. S. Co.: Your letter 12th: In reply I have to advise you that these buoys were left out during the winter at the Parry Sound ship channel, and I think that they have been recovered with the exception of one. Owing to the department's lack of facilities at this point it has not been possible to lift out these buoys and ship them to you, but this will be attended to at the earliest possible moment.

*G.T.R. account for Freight not paid yet.*

September 25, 1907.—Memorandum for accountant (by J. F. F.): This account (evidently referring to G.T.R. account for freight on buoy from Chatham referred to above), dated July 18, has been left on file, although the file was referred to you. The account is certified and should be paid to G.T.R.

*Almost without facilities for handling new Aids to Navigation in B.C.*

September 25, 1907.—To W. Kearns, A.G.'s office: I have your note 21th inst. The list promised you is nearly completed. We are almost without any facilities at Victoria for handling new aids to navigation, but they are being attended to with the least possible delay, and boats have been chartered for this purpose. Plans have been prepared for the new buoy steamers, and I expect the coming session will see sufficient provision made for this and other services. I have so far received excellent reports relative to both the gas buoys and beacons.

*I. M. S. Co. asked for complete list of all buoys and beacons supplied and where shipped to.*

September 25, 1907.—Deputy to I. M. S. Co.: I desire to call your attention to the request made some time ago to furnish this department with a complete list of all gas buoys and beacons supplied to it, together with the points to which they were sent. Kindly give this matter your immediate attention. (Initialled, J.F.F.)

*All freight on buoys to be prepaid.*

September 26, 1907.—Memorandum (J. F. F.) Owing to the difficulty experienced by the agents of the department in the various provinces in connection with the payment of heavy freight charges on gas buoys shipped from Ottawa, the undersigned recommends that the necessary steps be taken to prepay all freight charges by the department at Ottawa, before the material leaves for its destination. (Approved. F. G.—See letter to I. M. S. Co. on this file, J. F. F. 7-10-07.)

*11 x 14½ ft. buoy, Blonde Rock, Halifax Harbour, \$15,000.*

September 26, 1907.—Deputy to I. S. M. Co.: Your letter, 25th, advising shipment 11 x 14½ L. S. type gas and whistling buoy, serial No. 720, for Blonde Rock, N.S.

and inclosing invoice in triplicate and duplicate B L. This invoice has been forwarded to this department at Halifax for the necessary certificate.

No. 8½ C. Buoys Manner of mooring—Evidently promulgated for the first time.

September 27, 1907.—C. of L. to all agents: I inclose herewith a blue print showing the proper way to moor the No. 8½ C. automatic gas buoys. Hereafter all moorings put out are to conform in all respects to the dimensions shown on the print.

*I. M. S. Co.'s statement of buoys and beacons furnished department.*

October 2, 1907.—I. M. S. Co. (J. Bain, G. M.) to deputy: Your letter, 20 ultimo. We inclose herewith the required statement which we trust will be satisfactory for your purpose. (Copy sent Mr. Kearns, Audit Office, 7-10-07, J. F. F.) (S. page 231, MS. page 24b.)

*Plan of mooring No. 8½ C. buoys at Halifax.*

October 2, 1907.—Parsons, agent, Hal., to C. of L.: Your favour 27th ult., duly hand with blue print showing how our No. 8½ C. gas buoys should be moored. We have used just such moorings as here patterned for some years. We are not troubled with the bridle giving way. The links or shackles break apart by the continual wear ocean setting our buoys adrift. Since using government test chains, the breaking of our moorings has given no less trouble. (Stamped file, no action, J. F. F.)

*Department wants full particulars of all buoys re-shipped from the various agencies.*

October 9, 1907.—Deputy to all agencies: With further reference to circular letter, 7th inst., &c. As you are aware from time to time instructions have been received from the department to ship to other agencies certain of these gas buoys. I have to request you to check over the list and send to me a statement giving the serial number and type of the different buoys which have been sent out of your agency, and the instructions from the department, giving at the same time the agency to which they were sent.

*Victoria wants further instructions as to mooring buoys.*

October 3, 1907.—Victoria agent to C. of L.: Your letter 27th ult., as to correct way of mooring No. 8½ C. gas buoys. Up to the present we have not used any wire rope in mooring these buoys and request information as to whether the wire rope is to be in addition to the two or 2½ lengths of chain as the case may be. (Marked file and return, October 8, '07, J. F. F.)

*Spare purifier recommended for Prescott.*

October 14, 1907.—Memorandum: The undersigned begs to recommend that authority be given to procure from the I. M. S. Co. one station purifier for spare at an estimated cost of \$500, respectfully submitted, J. F. F. (Stamped file and return, October 23, '07, J. F. F., and in red ink 'This spare purifier would complete two sets of compressors, and in case of accident or fire I recommend this. The vote can also meet this. F. G., 22, 10, '07.)

*Buoys at Halifax agency—in service and in store.*

October 16, 1907.—Hal. to Deputy, saying they have at their agency: 20 No. 11 gas and whistling buoys on service, 3 No. 9 gas and whistling, 3 No. 8½ gas and bell, 2 No. 8½ gas only, 1 No. 7½ gas and bell, 1 No. 8 gas only. In the dockyard they have 7 No. 11 gas and whistling (one without lantern support), 3 No. 9 gas and whistling, 4 No. 8½ gas only, 1 No. 7 gas and bell, 2 No. 7 gas only. The above No. 11 buoys now at dockyard will be assigned the following places, replacing No. 9 and Courtenay buoys—Shelburne, Brazil Rock (now No. 9, g. & w.), Little Hope (now No. 9, g. & w.), Pubnico, S. W. Ledge, Cape Sable.

## SESSIONAL PAPER No. 29a

(In December.—Steamer *Kildonan* wrecked on Brazil Rock. Had the buoy been changed in the meantime, or was it being made and leaving the rock unmarked for a period during which the wreck took place?)

October 16, 1907.—Halifax to deputy: The following No. 9 type gas and whistling buoys No. 538, 542 and 545 have been sent out of this agency under your instructions to Charlottetown.

*No. 9 buoy—No. 546 gone adrift from Blonde Rock, October 1, 1906.*

October 1, 1906.—Buoy No. 546, No. 9, placed at Blonde Rock, went adrift about October 1, 1906, and has not been recovered.

October 22, 1907.—J. F. F. to U. P. Boucher, Montreal (telegram): Wire me total number of gas buoys in service at this date in your agency. Required for annual report. (Ans. 57, my letter 21st inst. gives full details.)

October 22.—J. F. F. to asst. C. of L., Prescott: Similar telegram. (Ans. A. Boyle, 36 aut., 3 compression gas buoys, M-K div.)

October 23, 1907.—J. F. F. to Boucher (telegram): Of the 57 gas buoys in service now, how many are automatic? (Ans. 11.)

October 24, 1907.—I. M. S. Co. send in account for No. 8½ C. bell buoy lantern support, \$84.

*Buoy for Beaujeu Bank, \$3,750.*

October 29, 1907.—Deputy to I. M. S. Co.: Instruct you to ship to Gregory, Que., 1 No. 8½ gas and bell buoy for Beaujeu Bank (Authorized, October 25.)

*Extra station purifier for Prescott.*

October 29, 1907.—Deputy to I. M. S. Co.: Instruct you to ship to D. L. II. depot, Prescott, 1 station purifier similar to those supplied by you for this department at your price, \$500. (Initialed, J. F. F.)

October 29, 1907.—Deputy to asst. C. of L., Prescott: Advises above. This purifier will be used together with the spare gas plant available at Prescott in case of a break down on the ship channel between Montreal and Kingston, or at Parry Sound.

October 7, 1907.—J. F. F. writes to Kearns, of the Audit Office, inclosing list furnished by the I. M. S. Co. of all gas buoys and beacons furnished the department during the years 1904, 5 and 6, and up to March 31, 1907, and saying he is having prepared a more complete one to indicate the serial numbers, types, &c., whether in service or spare. This should go to him about the 20th inst.

October 7 and 9.—Circular letter of the deputy to all agents of the department, instructing them to prepare a complete list of all automatic acetylene gas buoys under their charge, giving the serial number, type and character of the buoys; whether lighted or lighted signal, position, and the number of buoys held at their agencies as spare, together with a list of the gas beacons sent to them, the position assigned to them, and whether they are in operation—if not, the probable time that they will be put in service. The list should be brought to 15th inst. (October, 1907).

October 10.—Statement (apparently by the department) giving the quantity of buoys, serial number, type, character, date of shipment, sent to the following agencies:—

July 10.—In consequence of a request from the Auditor General for the information, the following letter was sent from the department to the I. M. S. Co.: 'I have to request you to be good enough to furnish me with a list of all the gas buoys furnished either by T. L. Willson or by the I. M. S. Co. up to and including all buoys delivered and paid for in the fiscal year 1906-7, together with the points for which

these buoys were intended, if the same was indicated to you in the order.' (Acknowledged by I. M. S. Co., July 15.)

June 28.—Memo. by J. F. F. about necessity of additional aids to navigation in British Columbia waters, in which he recommends 10 No. 9½ lighted whistling buoys to be procured from the I. M. S. Co., \$5,000 each, and shipped by the department through the agent at Victoria, B.C.

July 19.—Deputy to I. M. S. Co.: I have to request you to furnish Jas. Gaudin, agent of this department at Victoria, B.C., with 3 blue prints giving weight and governing dimensions of the No. 9½ gas buoys.

July 19.—Assistant Commissioner of Lights, Prescott, to I. M. S. Co.: I have sent you to-day in G.T. flat car, chgs. collect to your address, 1 aut. gas and whistle buoy, No. 11 type, serial 586, without superstructure, one box wrenches and one whistle. I inclose herewith the usual shipping list in duplicate, the duplicate which you might please sign when the buoy has been received and return to me. I also inclose railway company's shipping bill for same.

August 7.—A. Boyle, Acct., D.L.H.D., Prescott, to Acct., Marine and Field Department, Ottawa: 'I inclose herewith order to the credit of the Receiver General in my name for \$34.68. This is with reference to one No. 11 type buoy which was sent to the I. M. S. Co., Ottawa. You will note in statement of details that it is for labour and material loading this buoy.'

August 16.—G.T. Freight Agent, Ottawa to Department: 'On July 11 received from Chatham, Ont., 1 gas buoy, delivered to the I. M. S. Co., freight charges on which were \$101. I. M. S. Co. people informed me that these charges are payable by you. If so, will you kindly let me have your cheque at your earliest convenience and oblige.'

September 12.—I. M. S. Co. to J. F. F., Commissioner of Lights: 'As instructed by you, under date of August 1, we have finally shipped to you all the gas buoys which you had sent us for alterations, including the No. 7 valveless, to which we have fitted a new lantern support, owing to the original lantern support not being returned to us with the buoy. We note that you have not yet returned to us for alterations of the No. 5 buoys, Serial Nos. 505, 530-1-2 and 4, and also one type No. 6 buoy, Serial No. 550. As these latter buoys were originally shipped to Prescott, we presume that these are the buoys which are still at Parry Sound.'

September 25.—Commissioner of Lights to I. M. S. Co., in reply to above, page 251.

September 25.—Memo. for Acct. by J. F. F.: 'This account, dated July 18, 1907, has been left on file, although the file was referred to you. The account is certified and should be paid to the G.T. Ry.'

September 25.—Department to W. Kearns, A. G. Office (unsigned): I have your note of 24th inst. The list promised you is nearly completed, and I hope not to delay you much further in this matter. We are almost without any facilities at Victoria for handling new aids to navigation, but they are being attended to with the least possible delay, and boats have been chartered for this purpose. Plans have been prepared for the new buoy steamers, and I expect the coming session will see sufficient provision made for this and other service. I have so far received excellent reports relative both to the gas buoys and beacons.

September 25.—I desire to call your attention to the request made some time ago to furnish this department with a complete list of all gas buoys and beacons supplied to it, together with the points to which they were sent to. Kindly give this matter your immediate attention. (See July 10, page 251.)

September 26.—Memo, regarding proposed prepayment of freight on all buoys shipped from Ottawa. Initialed J. F. F. F. G. 7/10/07.



## SESSIONAL PAPER No. 29a

September 27.—Circular to all Agencies: I inclose herewith a blue print showing the proper way to moor the No. 8½ automatic gas buoys. Hereafter all moorings put out are to conform in all respects to the dimensions shown on the print.

October 2.—I. M. S. Co. to Deputy: Your letter, 26th ult., received directing our attention to a request made by your department some time ago to furnish you with a complete list of all gas buoys and beacons supplied to it. We take pleasure in inclosing you herewith the required statement, which we trust will be satisfactory for your purpose.

List of acetylene gas buoys and beacons furnished the Department of Marine and Fisheries, Canada, during the years 1904-5 and 6, and up to March 31, 1907. See folio 3, 27858 file extracts.

October 7.—Deputy to Agent, Victoria: I have to instruct you to prepare immediately a complete list of all automatic acetylene gas buoys under your charge, giving the serial number, type and character of the buoy, whether lighted or lighted signal position; and the number of buoys held at your agency as spare; together with a list of the gas beacons sent to you, the positions assigned to them and whether they are in operation. If not, the probable time that they will be put in service. The list should be brought up to the 15th inst.

October 7.—Circular: I have to instruct you to prepare immediately a complete list of all automatic acetylene gas buoys under your charge, giving the serial number, type and character of the buoy, whether lighted or lighted signal position; and the number of buoys held at your agency as spare. The list should be brought up to the 15th inst. (Sent to agents—British Columbia (1), Parry Sound (2), Prescott (3), Montreal (4), Quebec (5), St. John, N.B. (6), Halifax (7), Charlottetown (8).)

October 9.—Circular: With further reference to circular letter of 7th inst., instructing you, &c., &c., I inclose herewith a statement giving the serial number and type of gas buoys shipped by the I. M. S. Co. to you. As you are aware, from time to time instructions have been received from the department to ship to other agencies certain of these gas buoys. I have to request you to check over the list inclosed, and send to me a statement giving the serial number and type of the different buoys which have been sent out of your agency under instructions from the department, giving at the same time the agency to which they were sent. (Sent to Parry Sound (1), Montreal (2), Quebec (3), St. John (4), Halifax (5), Charlottetown (6), Prescott (7).)

October 3.—Victoria agent to Commissioner of Lights: Your letter, 27th inst., inclosing blue print showing the correct way to moor No. 8½C aut. gas buoy, and instructing that hereafter all moorings put out are to conform in all respects to the dimensions shown on this print. Up to the present we have not used any wire rope in mooring the No. 8½C gas buoys, and request information as to whether the wire rope is to be in addition to the 2 or 2½ lengths of chain, as the case may be.

*Gas buoys shipped to Montreal (10).*

- 591 No. 8½C gas, September 11, 1907.
  - 2 No. 8½C gas, September 11, 1907.
  - 3 No. 8½C gas, September 11, 1907.
  - 4 No. 8½C gas, September 11, 1907.
  - 685 No. 8½C gas, April 5, 1907.
  - 6 No. 8½C gas, April 5, 1907.
  - 7 No. 8½C gas, April 6, 1907.
  - 8 No. 8½C gas, April 6, 1907.
  - 9 No. 8½C, gas, April 8, 1907.
  - 690 No. 8½C, gas, April 8, 1907.
- The above all shipped to Sorel.

*Gas buoys shipped to Port Arthur (6).*

- 527 No. 5, gas, April 28, 1905.  
 8 No. 5, gas, April 28, 1905.  
 9 No. 5, gas, April 28, 1905.  
 615 No. 8½C, gas, October 19, 1906.  
 6 No. 8½C, gas, October 19, 1906.  
 7 No. 8½C, gas, October 19, 1906.

The last 3 shipped to Mr. J. Cooper, lightkeeper.

- 587 Owen Sound, No. 11, whistle and bell, black-white occulting, Surprise shoal (8 in all); but by another statement accounts for 17, leaving out the five No. 5's to be shipped to Ottawa.

In supplementary statement gives 2 No. 9½ type buoys, Nos. 715-9; 3 No. 7 type buoys, Nos. 512, 524, 502; all said to be in service but no place named.

Also, stated in same supplementary statement that there are on hand 5 No. 5 buoys, to be shipped to Ottawa, Nos. 505, 530, 532, 533 and 550.

In third statement additions are made to the original list, which now includes No. 587 (above) and 718-9, No. 9½, gas and whistling, and 512, 524, 502, No. 7, gas; all said to be in service, but naming no places.

*Gas buoys shipped to Parry Sound (11).*

- 508—(Depot Harbour) No. 11, gas and whistle, May 3, 1906. Seguin Bank Parry Sound, chl. Black, white occulting.  
 9 (Depot Harbour) No. 11, gas and whistle, May 8, 1906. Lone rock, Parry Sound. Red, white occulting.  
 607 (Depot Harbour) No. 8½C, gas, September 29. Hall rock, P. Sound. Red white occulting.  
 8 (Depot Harbour) No. 8½C, gas, September 29. Three Star shoal, P. Sound. Red, white occulting.  
 610 (Depot Harbour) No. 8½C, gas, October 1. S. Extremity shoal S. from Spruce island. Colour, black, white occulting.  
 1 (Depot Harbour) No. 8½ C, gas, October 1. Lockerby rock, Collingwood approach. Black, white occulting.  
 2 (Depot Harbour) No. 8½, gas, October 1. Hooper island, P. Sound chl. Red, white occulting.  
 676 (Depot Harbour) No. 8½C, gas, April 13, 1907. In supplementary statement said to be in service, but no name of place given.  
 7 (Depot Harbour) No. 8½C, April 13, 1907. In supplementary statement said to be in service, but no name of place given.  
 8 (Depot Harbour) No. 8½C, April 13, 1907. In supplementary statement said to be in service, but no name of place given.  
 9 (Depot Harbour) No. 8½C, April 13, 1907. In supplementary statement said to be in service, but no name of place given.

*Gas buoys shipped to Charlottetown (6).*

Indian rocks, No. 9, gas and whistling, white flash (Serial No. not known), placed by steamer *Stanley* on her way from Pictou to Scotland. Serial No. not given to me by the Halifax agent.

- 544 No. 9, gas and whistling, August 25, 1905. 'Point Prim,' No. 9, gas and whistling, No. 538. Red flash, white flash.  
 613 No. 8½C, gas only, October 5, 1906. Spare on Marine wharf.

## SESSIONAL PAPER No. 29a

- 614 No. 8½C, gas only, October 5, 1905. Taken to Halifax by department's instructions by steamer *Aberdeen*, when placing gas and whistling buoy No. 9 on Miscouche shoal. Miscouche shoal No. 9, gas and whistling, 545.
- 695 No. 8½C, gas, April 20, 1907. Fitzroy rock, gas and whistling buoy.
- 6 No. 8½C, April 20, 1907. Zephyr rock, Shediac bay, No. 7, gas only. Serial number unknown.
- 7 No. 8½C, April 20, 1907.

These last three eventually sent to Halifax.

*Gas buoys shipped to St. John, N.B. (16)—where placed.*

- 548 Campbellton, No. 6, gas, January 31, 1906. Campbellton.
- 9 Chatham, No. 6, gas, February 3, 1906. Miramichi river.
- 551 Campbellton, No. 6, gas, January 31, 1906. Campbellton.
- 2 Campbellton, No. 6, gas, January 31, 1906. Campbellton.
- 4 Chatham, No. 6, gas, February 3, 1906. Miramichi river.
- 5 Campbellton, No. 6, gas, January 31, 1906. Campbellton.
- 6 Campbellton, No. 6, gas, January 31, 1906. Campbellton.
- 7 Campbellton, No. 6, gas, January 31, 1906. Campbellton.
- 9 Chatham, No. 6, gas, February 3, 1906. Miramichi river.
- 572 No. 11, gas, June 20, 1906.
- 3 No. 11, gas, June 20, 1906.
- 5 No. 11, gas, June 20, 1906.
- 663 No. 11, gas, March 27, 1906.
- 4 No. 11, gas, March 27, 1906.
- 674 No. 8½C, bell, gas, April 12, 1907. Avon river.
- 698 No. 9½, gas, April 22, 1907.

Gas and whistling, Blonde rock, occulting white. Gas and whistling, Lurcher. N.W. Fairway, Yarmouth. S.W. Fairway, Yarmouth. 8½ 674, gas and bell, Avon river. The above are in charge of New Brunswick agency, but they were received and first placed by the Nova Scotia agency.

*Gas buoys shipped to Halifax (73).*

- 504 No. 9, gas, December 31, 1904.
- 6 No. 7, gas, February 22, 1905.
- 7 No. 7½, gas, February 15, 1905.
- 8 No. 7, gas, February 22, 1905.
- 526 No. 7, special gas, July 3, 1905.
- 538 No. 9, gas, July 14, 1905.
- 9 No. 9, gas, August 5, 1905.
- 540 No. 9, gas, July 18, 1905.
- 1 No. 9, gas, August 2, 1905. Brazil rock.
- 2 No. 9, gas, July 27, 1905.
- 3 No. 9, gas, July 20, 1905.
- 5 No. 9, gas, September 2, 1905.
- 6 No. 9, gas, September 23, 1905. Lost from Blonde rock, October 10, 1906.
- 7 No. 9, gas, September 18, 1905.
- 3 No. 9 and 8. No. 7.
- 560 No. 11, gas, 16 March, 1906; Blonde Rock.  
(Buoy lost from Blonde Rock about 1 October, 1906, was 546, No. 9.)
- 1 11 gas, 16 March, 1906 (Dockyard).
- 2 11, gas, 31 March, 1906; Guzon Island.
- 3 11, gas, 5 April, 1906; Isaac's Harbour.
- 4 11, gas, 19 April, 1906; Sambro.

505	11, gas, 14 April, 1906; Liverpool.
6	11, gas (in trouble; see Hutchins' report), 10 April, 1906; inner automatic, Halifax.
7	11, gas, 21 April, 1906; dockyard.
570	11, gas, 23 May, 1906; Sheet Rock.
1	11, gas, 31 May, 1906; White Head.
4	11, gas 19 June, 1906; dockyard; (no lantern support).
6	11, gas, 25 July, 1906; Louisbourg.
7	11, gas, 4 July, 1906; dockyard.
8	11, gas, 12 July, 1906; Lockeport.
9	11, gas, 30 July, 1906; Liscomb.
580	11, gas, 30 July, 1906; Egg Island.
1	11, gas, 25 July, 1906; Yarmouth Fairway.
2	11, gas, 27 July, 1906; dockyard.
3	11, gas, 4 August, 1906; dockyard.
4	11, gas, 4 August, 1906; Cerberus.
5	11, gas, 4 August, 1906; Canso.
8	11, gas, 26 October, 1906; Lunenburg.
590	8½c, gas, 29 October, 1906; dockyard.
5	8½c, gas, 29 October, 1906; Middle Ground, Halifax.
625	14, gas, 26 January, 1907; Outer automatic, Halifax; also classed as N.
659	8½c (bell), gas, 1 April, 1907; East Point Ledge, Lunenburg.
669	8½c (bell), gas, 1 April, 1907; Hen and Chickens, Yarmouth.
1	11, gas, 27 March, 1907; dockyard.
2	11, gas, 27 March, 1907; Cape Fourchu.
689	8½c (bell) gas, 20 May, 1907; spare.
720	11 x 14½, gas, 24 Sept., 1907.

Also, without numbers, N.W. Ledge and S.W. Ledge, Brier Island.

" No. 8½, gas and bell, No. 699, Thrump Cap, Halifax.

" No. 8½, gas only, No. 696, Neverfail, Halifax.

" No. 9, G. and W., No. 540, Little Hope; 541, Brazil Rock; 543, N. E. Shore.

" No. 7½, gas and bell, 570, La Havre.

" No. 8, gas only, 519, Avon river, Minas Basin.

" No. 9, G. and W., Nos. 504, 539, 547, at dockyard.

" No. 8½, gas only, 590 (see main list), 614, 695, 697, at dockyard.

" No. 7, gas and bell, No. 526, in dockyard.

" No. 7, gas only, 506, 508. Accounts for 47 in all.

The above No. 11 G. and W. Buoys now at dockyard will be assigned to the following positions:—Shelburne, Brazil Rock, Little Hope, Pubnico, S. W. Ledge, Cape Sable. This will leave us with spare buoys as follows: 1 complete No. 11, or 3 when the new Blonde Rock buoy arrives, and when we get a lantern support for No. 5. Five No. 9; four No. 8½, gas only; two No. 7, gas only, and one 7 gas and bell.

St. John agency looks after Yarmouth Fairway, Cape Fourchu, Hen and Chickens, Blonde Rock, N. W. Ledge, S. W. Ledge and Avon River.—Halifax Actg. Supt. Lights, 16th Oct., 1907.

Also, 538, No. 9, gas and whistling, Charlottetown.

" 542, No. 9, gas and whistling, Charlottetown.

" 545, No. 9, gas and whistling, Charlottetown.

Buoy 546, No. 9, placed at Blonde Rock, went adrift about 1st October, 1906, and has not been recovered.—Halifax Supt. Lights, 16th Oct., 1907.

#### Prescott.

Buoys accounted for at Prescott, but not included in list of buoys shipped from Prescott, as shown by the International Marine Signal Co., and as given on page annexed hereto.

## SESSIONAL PAPER No. 29a

## Serial No.

- 549—Received here June 20, 1907; stored at D. L. H. D., Prescott.
- 555—Received here June 20, 1907; Kingston for Trenton harbour; gas buoy, July 12, 1907. Was lifted a week or so ago at close of navigation, and is lying at Kingston in order to be placed again at Trenton on the opening of navigation.
- 9—Received here June 20, 1907; stored at D. L. H. D., Prescott.
- 551—Received here August 17, 1907; shipped to Montreal agency October 1, 1907.
- 2—Received here August 17, 1907; shipped to Sault Ste. Marie for Vidal shoal, October 23, 1907.
- 7—Received here August 17, 1907; stored at D. L. H. D., Prescott.
- 4—Received here August 17, 1907; shipped to Sault Ste. Marie for upper turning buoy, October 23, 1907.
- 6—Received here August 17, 1907; stored at Prescott for gas buoy 6 T—in Montreal-Kingston division.
- 548—Received here August 26, 1907; stored at Prescott; for gas buoy 6 U.
- 528—Received here August 26, 1907; stored at Prescott.
- 7—Received here August 26, 1907; stored at Prescott.
- 9—Received here August 11, 1907; shipped to Parry Sound agency, October 29, 1907.

*From Quebec Agency.*

- 511—Received here July 21, 1906; shipped to Amherstburg automatic gas buoy, October 7, 1907.
- 2—Received here July 21, 1906; shipped to Parry Sound agency, Oct. 12, 1907.
- 6—Received here July 21, 1906; shipped to Goderich for breakwater buoy, June 21, 1907
- 4 (524 in Boyle's statement)—Received here July 21, 1906; shipped to Parry Sound agency, October 12, 1907.

*Boyle's explanations.*

The following letter from Prescott accompanied the statement of the disposal of all the buoys received at that agency:—

December 12, 1907.—A. Boyle, officer in charge D. H. L. D., Prescott, to Commissioner of Lights, Ottawa: With reference to your Mr. White's telephone communication of to-day's date re serial numbers of buoys, I have to state that Serial Nos. 501 and 2 were shipped to the International M. S. Co., Ottawa, October 30, 1906, and have not been returned here.

Serial No. 503 shipped to the I. M. S. Co., Ottawa, October 30, 1906 received back at this depot September 11, 1907. It was then re-shipped to Amherstburg October 7, 1907.

Serial Nos. 505, 530, 2, shipped to Parry Sound April 23, 1906.

Serial No. 550 shipped to Lockerby shoal, P. S. Dist., May 11, 1906.

Serial Nos. 552, 4, shipped to Sault Ste. Marie for Vidal shoal and turning point, October 23, 1907.

Serial Nos. 553 and 8 shipped to Nova Scotia agency, March 8, 1906.

(NOTE.—This is a mistake; 558; was received back at Prescott August 17, 1907, and is now stored at D. L. H. Depot, Prescott, for gas buoy, 8 U.)

Serial No. 555—This was placed in Trenton harbour by C. G. S. *Scout*, July 12, 1907. Was lifted a week or so ago at the close of navigation, and is lying at Kingston in order to be placed again at Trenton on the opening of navigation.

Serial No. 556—On Montreal to Kingston division; gas buoy No. 6 T.

Serial No. 557—This is lying in our yard here.

If you wish any other information about the above serial numbers, kindly let me know, and I will see that the same has my prompt attention.

October 10.—Continuation from page of C. of L.'s letter to W. Keair would call your attention to the list of gas buoys shipped to Prescott. As you are aware, the authority of an Order in Council was obtained to exchange lighted whistling and bell buoy, Serial No 586, for two No. 9½ lighted whistling buoys, Serial Nos. 718 and 9, the department paying the difference in price to the I. M. S. Co. Consequently, lighted whistling and bell buoys, Serial No. 586, should be eliminated from the list of buoys in the possession of the department.

October 11.—C. of L. to Victoria agent: Your letter 3rd inst. with reference to the mooring for 8½ C automatic buoys. Referring to second paragraph your letter beg to advise you that the total length of chain or wire rope used should be from one and one-half times the depth of water in which the buoy is moored. This length to be made up partly of wire rope and partly of chain. The idea of using wire rope is to decrease the weight of mooring to be carried by the buoy; the last 10 fathoms must be of chain in order to prevent chafing on the bottom.

September 30—Asst. C. of L., Prescott, to C. of L.: Your letter 27th inst. respecting enclosing a blue print showing the proper way to moor an 8½ C type automatic buoy. I am having a tracing made of this in order that blue prints may be made from it and given to the proper parties interested in same.

October 22.—J. F. F. to F. P. Boucher, Montreal (telegram): Wire me the number of gas buoys in service at this date in your agency. Required for annual report. Ans. 57. My letter, 21st inst., to C. Stanton, gives full details.

October 22.—Same to Prescott. Ans.: 36 automatic, 3 compression gas buoys. Montreal-Kingston division.

October 23.—J. F. F. to F. P. Boucher (telegram): Of the 57 gas buoys in service how many are automatic? Reply: Boucher to J. F. F. (telegram): 11 out of the 57 gas buoys are automatic.

November 1.—I. M. S. Co. to Deputy: Acknowledging receipt cheque, \$84.00, for lantern support.

*Buoys shipped to Quebec (15th Oct., '07).*

Serial No.

- 509 No. 7 gas, Feb. 25, 1905; in service in Quebec district.
- 510 No. 7 gas, Feb. 25, 1905; in service in Quebec district.
- 1 No. 7 gas, Feb. 28, 1905; shipped to Parry Sound via Prescott, July 6, 1906.
- 2 No. 7 gas, Feb. 28, 1905; shipped to Parry Sound via Prescott, July 6, 1906.
- 3 No. 7 gas, March 2, 1905; in service Quebec district.
- 4 No. 7 gas, March 2, 1905; in service Quebec district.
- 5 No. 7 gas, March 31; shipped to St. John, N.B., June 6, 1906.
- 6 No. 7 gas, March 31, 1905; shipped Parry Sound via Prescott, July 16, 1906.
- 7 No. 7 gas, April 5, 1905; on dock at Quebec as spare.
- 8 No. 7 gas, April 5, 1905; in service Quebec district.
- 9 No. 7 gas, April 5, 1905; shipped St. John, N.B., June 6, 1906.
- 520 No. 7 gas, April 5, 1905; shipped St. John, N.B., June 6, 1906.
- 1 No. 7 gas, April 12, 1905; in service Quebec district.
- 2 No. 7 gas, April 15, 1905; spare at Quebec, on dock.
- 3 No. 7 gas, April 12, 1905; spare at Quebec, on dock.
- 4 No. 7 gas, April 15, 1904; shipped to Parry Sound, via Prescott, July 1906.
- 5 No. 7 gas, April 25, 1905; in service Quebec district.
- 589 No. 11 gas, Sept. 19, 1906; shipped St. John, N.B., June 6, 1906.
- 596 No. 8½ C gas, Sept. 18, 1906; in service in Quebec district. Willson instructed to ship, Sept. 19, 1906.
- 7 No. 8½ C gas, Sept. 18, 1906; spare at Quebec, in dock. Willson instructed to ship, Sept. 19, 1906.

## SESSIONAL PAPER No. 29a

## Serial No.

- 598 No. 8½C, gas, Sept. 20, 1906; spare at Quebec, in dock. Willson instructed to ship, Sept. 19, 1906.
- 9 No. 8½ C gas, Sept. 20, 1906; spare at Quebec, in dock. Willson instructed to ship, Sept. 19, 1906.
- 600 No. 8½C gas, Sept. 21, 1906; in service in Quebec district. Willson instructed to ship, Sept. 19, 1906.
- 1 No. 8½C gas, Sept. 24, 1906; in service in Quebec district, Willson instructed to ship, Sept. 19, 1906.
- 2 No. 8½C, gas, Sept. 24, 1906; in service in Quebec district. Willson instructed to ship, Sept. 19, 1906.
- 3 No. 8½C gas, Sept. 21, 1906; in service in Quebec district. Willson instructed to ship, Sept. 19, 1906.
- 4 No. 8½C gas, Sept. 27, 1906; in service in Quebec district. Willson instructed to ship, Sept. 19, 1906.
- 5 No. 8½C gas, Sept. 27, 1906; in service in Quebec district. Willson instructed to ship, Sept. 19, 1906.
- 6 No. 8½C gas, Sept. 26, 1906; in service in Quebec district. Willson instructed to ship, Sept. 19, 1906.
- 9 No. 8½C gas, Sept. 26, 1906; in service in Quebec district. Willson instructed to ship, Sept. 19, 1906.
- 702 No. 8½C bell and gas, June 26, 1907; in service in Quebec district.
- 3 No. 8½C bell and gas, June 26, 1907; on dock at Quebec agency undergoing repairs, it having been struck by a passing vessel while in service.
- 4 No. 8½C bell and gas, June 26, 1907; in service in Quebec district.
- 5 No. 8½C bell and gas, June 26, 1907; in service in Quebec district.

(Sgd.) CAPTAIN KOENIG, SS. *Druid*,  
Supdt. Buoy Service, Quebec Dist.

*Agency, New Brunswick.*

October 11, 1907.—Memo. of gas buoys received by the New Brunswick agent:—  
Where placed. When placed. Character of light.

- No. 11 575 G. and W.—Old Proprietor—April 21, 1907—Fixed white.
- No. 11 2 G. and W.—N.W. Ledge, Brier Island—January 30, 1907—Occulting white.
- No. 11 3 G. and W.—North Wolves.—January 31, 1907—Occulting white.
- No. 11 664 G. and W.—Point Lepereaux—May 9, 1907—Occulting white.
- No. 11 3 G. and W.—S.W. Brier Island—August 21—Occulting light.
- No. 9½ 698 G. and W.—SE. Partridge Island—Occulting white.
- No. 7 519 gas—Foul Ground—December 22, 1906—Occulting white.

*Campbellton, N.B.*

- No. 8½ 652 gas buoy—Fullerton's bar—White.
- No. 8½ 640 gas buoy—Point Lalimb—White.
- No. 8½ 1 gas buoy—Point LeGarde—White.
- No. 8½ 2 gas buoy—Oak Point—White.
- No. 8½ 9 gas buoy—Traverse—White.
- No. 8½ 650 gas buoy—On shoal where Barber buoy was—Red.

*Miramichi River buoys.*

- No. 8½ 652, gas buoy—Spare.
- No. 8½ 5 gas buoy—Fairway—May 17, 1907—White.
- No. 8½ 6 gas buoy—Dredge—May 17, 1907—White.

7-8 EDWARD VII., A. 1908

*Spare buoys.*

No. 11½ 589 gas and whistling, on hand Oct. 11, 1907; received from Quebec agency.

No. 8½ 520 gas and bell, on hand Oct. 11, 1907.

No. 9 674 gas on hand Oct. 11, 1907.

*Buoys shipped to Prescott.*

November 21, 1907.—File 27858. W. H. Noble, Prescott, to deputy minister: With further reference to your letter of 9th October, inclosing a statement giving the serial numbers and types of the gas buoys shipped by the International M. S. Co. to this depot, I return herewith the list, which is correct. I also herewith give you a list showing where these buoys are.

(See letter following).

The following is the departments' list, inclosed their letter 9th October:—

- 501 No. 5, special gas, 22 Aug., 1904; shipped to Point du Chene, P.E.I., 31 August, 1905.
- 2 7, gas, 30 Sept., 1904; shipped to Ottawa, 30 Oct., 1906.  
(New lanterns, 16 March, 1906, sent to breakwater contractor, Prescott).
- 3 7, gas, 3 October, 1904; received here 11 Sept., 1907; shipped to Amherstburg to mark new cut 7 Oct., 1907. (503 shipped I. M. S. Co., 30 Oct., 1906; received back, 11 Sept., 1907.)
- 5 5 (stored), gas, 21 Feb., 1905; shipped to Parry Sound, 23 April, 1906.
- 530 x 5, gas, 6 May, 1905; received here 6 May, 1905; shipped Parry Sound, 23 April, 1906.
- 1 x 5, gas, 6 May, 1905; received here 6 May, 1905; shipped Parry Sound 23 April, 1906.
- 2 x 5, gas, 6 May, 1905; received here 6 May, 1905; shipped Parry Sound, 23 April, 1906.
- 3 5, gas, 12 May, 1905; sent Thames river, gas buoy, 6 July, 1906\*.  
(\*This must have been shipped from Thames river back to Ottawa, as it was received back again from Ottawa 11 Aug., 1907, and reshipped to Parry Sound 20 Oct., 1907.)
- 4 x 5, gas, 18 May, 1905; received here 30 May, 1905; shipped to Parry Sound 23 April, 1906.
- 5 5, gas, 12 May, 1905; shipped Ottawa 30 Oct.; received back 26 Aug., 1907; now stored Lachine; as stand by buoy, Montreal-Kingston Div.
- 6 p 5, gas, 12 May, 1905; sent N.B. agency 12 Jan., 1906; must have been shipped to Ottawa from N.B. agency as it was received back from Ottawa 29 August, 1907, and now stored at Prescott for gas buoy 27 in this division.
- 7 p 5, gas, 18 May, 1905; received 30 May, 1905; shipped to Ottawa 30 Oct., 1906; received here again 26 Aug., and now stored at this depot as stand by buoy. (10 No. 5 and 2 No. 7, up to 10 Oct., 1905.)
- 550 x 6, gas, 12 Feb., 1906; received 14-2-'06; shipped to Lockerby Shoal, P. S. Dist., 11 May, 1906.
- 3 6, gas, 12 Feb., 1906; received 14-2-'06; shipped to Nova Scotia agency 8 March, 1906.
- 8 6, gas, 12 Feb., 1906; received 14-2-'06; shipped to Nova Scotia agency. 8 March, 1906; received again ('here' 17 Aug., 1907, and now stored at D. L. H. Depot for gas buoys S.U.)
- 586 11, gas, 24 Aug., 1906; received here 28 Aug., 1906; shipped to Ottawa 18 July, 1907.
- 7 11, gas, 27-Aug., 1906; received here 28 Aug., 1906; shipped to Parry Sound agency for Surprise Shoal, 3 April, 1907.



## SESSIONAL PAPER No. 29a

- 618 8½ gas, 23 Oct., 1906; received 2 Oct., 1906; stored at Prescott.
- 9 8½ gas, 23 Oct., 1903; received 2 Oct., 1906; shipped B.C. ag'y 30 Apl., '07.
- 620 8½ gas, 26 Oct., 1906; received 27 Oct., 1906; sent Chatham for Thames river 25 May, 1907.
- 1 8½ gas, 26 Oct., 1906; received 27 Oct., 1906; sent B.C., agency 12 Dec., 1907.
- 2 8½ gas, 27 Oct., 1906; received 27 Oct., 1906; sent B.C. agency 12 Dec., '07.
- 3 8½ gas, 27 Oct., 1906; received 27 Oct., 1906; sent B.C. agency 12 Dec., '07.
- 4 8½ gas, 27 Oct., 1906; received 27 Oct., 1906; sent B.C. agency 12 Dec., '07.
- 631 8½ gas, 1 March, 1907; received 7 March, 1907; stored at Prescott for gas buoy 54u.
- 2 8½c gas, 1 March, 1907; received 7 March, 1907; stored at Kingston for gas buoy 69t.
- 3 8½ gas, 1 March, 1907; received 7 March, 1907; stored at Prescott for gas buoy 38t.
- 4 8½ gas, 1 March, 1907; received 7 March, 1907; stored at Kingston for gas buoy 46t.
- 5 8½ gas, 1 March, 1907; received 7 March, 1907; stored at Coteau Landing gas buoy 84th.
- 7 8½ gas, 16 March, 1907; received 19 March, 1907; stored at Cornwall for gas buoy 48t.
- 8 8½ gas, 16 March, 1907; received 19 March, 1907; stored at Coteau Landing for gas buoy 104s.
- 9 8½ gas, 19 March, 1907; received 28 March, 1907; sent Campbellton, N.B. agency, 1 April, 1907.
- 640 8½ gas, 19 March, 1907; received 28 March, 1907; sent Campbellton, N.B. agency, 1 April, 1907.
- 1 8½ gas, 19 March, 1907; received 28 March, 1907; sent Campbellton, N.B. agency, 1 April, 1907.
- 2 8½ gas, 19 March, 1907; received 28 March, 1907; sent Campbellton, N.B. agency, 1 April, 1907.
- 3 8½ gas, 20 March, 1907; received 27 March, 1907; stored at Coteau Landing for gas buoy 102s.
- 4 8½ gas, 20 March, 1907; received 27 March, 1907; stored at Coteau Landing for gas buoy 98s.
- 5 8½ gas, 20 March, 1907; received 27 March, 1907; stored at Lachine for gas buoy 86s.
- 6 8½ gas, 20 March, 1907; received 27 March, 1907; stored at Kingston for gas buoy 8t.
- 7 8½ gas, 20 March, 1907; received 27 March, 1907; stored at Kingston for gas buoy 12t.
- 8 8½ gas, 20 March, 1907; received here 27 March, 1907; stored at Prescott for gas buoy 40u.
- 9 8½ gas, 26 March, 1907; received here 28 March, 1907; sent Campbellton, N.B. agency, 1 April, 1907.
- 650 8½ gas, 26 March, 1907; received here 28 March, 1907; sent Campbellton, N.B. agency, 1 April, 1907.
- 1 8½ gas, 29 March, 1907; received here 4 April, 1907; stored at Coteau for gas buoy 80f.
- 2 8½ gas, 29 March, 1907; received here 4 April, 1907; sent to Chatham, N.B. agency, 4 April, 1907.
- 3 8½ gas, 29 March, 1907; received here 4 April, 1907; stored at Cornwall for gas buoy 73f.
- 4 8½ gas, 29 March, 1907; received here 4 April, 1907; stored at Cornwall for gas buoy 88f.

655	8½, gas, 29 March, 1907; received here 4 April, 1907; sent to Chatham, N.B. agency, 4 April, 1907.
6	8½, gas, 29 March, 1907; received here 4 April, 1907; sent to Chatham, N.B. agency, 4 April, 1907.
7	8½, gas, 29 March, 1907; received here 6 April, 1907; stored Cornwall for gas buoy 48f.
8	8½, gas, 29 March, 1907; received here 6 April, 1907; stored Lachine for gas buoy 38s.
665	8½, gas, 29 March, 1907; received here 6 April, 1907; stored Lachine for gas buoy 76s.
6	8½, gas, 29 March, 1907; received here 6 April, 1907; stored Lachine for gas buoy 48s.
7	8½, gas, 29 March, 1907; received here 6 April, 1907; stored Coteau Landing for gas buoy 43f.
8	8½, gas, 29 March, 1907; received here 6 April, 1907; stored at Cornwall for gas buoy 96f.
9	8½, gas, 4 April, 1907; received here 11 April, 1907; stored at Kingston for North Port Shoal.
670	8½, gas, 3 April, 1907; received here 10 April, 1907; stored Coteau Landing for gas buoy 36f.
1	8½, gas, 3 April, 1907; received here 10 April, 1907; stored Cornwall for gas buoy 69f.
2	8½, gas, 4 April, 1907; received here 11 April, 1907; stored Coteau Landing for gas buoy 25f.
3	8½, gas, 11 April, 1907; received here 11 April, 1907; stored at Coteau Landing for gas buoy 40f.
5	8½, gas, 11 April, 1907, received here 11 April, 1907; stored Cornwall for gas buoy 76f.
680	8½ (Kingsville) gas, 11 April, 1907.
1	8½, gas, 11 April, 1907; received here 10 April, 1907; stored Coteau Landing for gas buoy 100s.
2	8½, gas, 1 April, 1907; received here 10 April, 1907; stored Lachine for gas buoy 53s.
3	8½ (Kingsville) gas, 11 April, 1907.
4	8½ (Kingsville) gas, 11 April, 1907, x
691	8½, 12 April, 1907; received here 11 April, 1907; stored Cornwall for gas buoy 68f.
2	8½, gas, 12 April, 1907; received here 11 April, 1907; stored Coteau Landing for gas buoy 46f.
3	8½ (Southampton), gas, 16 April, 1907, x
700	8½ (Amherstburg), gas, 27 May, 1907, x.
1	8½ (Amherstburg), gas, 27 May, 1907, x.
718	9½, gas, 16 Aug., 1907; received here 26 Aug., 1907; shipped Parry Sound 26 Aug., 1907.
9	9½, gas, 16 Aug., 1907; received here 26 Aug., 1907; shipped Parry Sound 26 Aug., 1907.

September 25, 1907.—Deputy to I.M.S. Co.: 'I have to acknowledge receipt of your letter 12th inst., stating that you have shipped all the gas buoys sent to you for alterations, including the No. 7 valveless, to which you have had to fit a new lantern support, owing to the original lantern support not being returned to you with the buoy. I note that the following buoys have not been received yet, viz., type No. 5 buoys Nos. 505, 530-1-2 and 4; also one type No. 6, 550. (See these numbers marked with X on page 260). In reply I have to advise you that these buoys were left out during the winter at the Parry Sound ship channel and I think that they have been recovered, with the exception of one. Owing to the department's lack of facilities at

## SESSIONAL PAPER No. 29a

this point, it has not been possible to lift out these buoys and ship them to you, but this will be attended to at the earliest possible moment.

Nov. 27, 1907.—Deputy to Asst. Commissioner Lights, Prescott: 'I am advised by the I.M.S. Co. that the following gas buoys have been received by them for repairs, &c., and reshipped to the Dom. L. H. Depot:—

Type No. 5, serial numbers 527, 8, 9, 533, 5, 6, 7.

Type No. 6, serial numbers 548, 9, 551-9, and have to request you to advise me what disposition was made of them.

Nov. 29, 1907.—(Prescott writes): 'These buoys are placed as follows (from Boyle's list 16 Dec., 1907):—

Type No. 5—527, in yard at D.L.H. depot; 555, received 20 June, 1907; stored at Kingston for Trenton harbour gas buoy.

Type No. 5—528, in yard at D.L.H. depot; 552, received 17 Aug., 1907; shipped Sault Ste. Marie for Vidal Shoal, 23 Oct., 1907.

Type No. 5—529, shipped to Parry Sound agency; 557, received 17 Aug., 1907; stored at D.L.H. depot.

Type No. 5—533, shipped to Parry Sound agency; 554, received 17 Aug.; shipped Sault Ste. Marie for Upper Turning Buoy, 23 Oct., 1907.

Type No. 5—535, Gas buoy at Montreal-Kingston Division; in depot.

Type No. 5—536, Gas buoy at Montreal-Kingston Division; in depot.

Type No. 5—537, in yard at D.L.H. depot; in depot.

Type No. 6—548, Gas buoy, Montreal-Kingston Division; in depot.

Type No. 6—549, in yard at D.L.H. depot; received 20 June, 1907; stored D.L.H.D.

Type No. 6—551, shipped to Sorel for Montreal agency, 13 Sept., 1907; received August 17; shipped to Montreal agency 1 Oct.

Type No. 6—559, in yard at D.L.H. depot; received 20 June, 1907; stored D.L.H. depot.

October 10, 1907.—Deputy to John Cooper, Light Keeper, Port Arthur: 'I inclose a list of gas buoys shipped to Port Arthur by this department together with their serial numbers. Please give me a list of the buoys now under your charge, with their serial number, and the buoys which have been returned by direction of the department and the point to which they were shipped.

October 10, 1907.—C. of L. to W. Kearns, A.G. Office: 'I inclose for your information, first, copy of records of automatic gas buoys and beacons kept in the office of the C. of L. This gives the serial numbers of all gas buoys and beacons which have been shipped either by T. L. Willson or the I.M.S. Co. to the order of the department, and the points to which these buoys were shipped. It has been necessary to transfer buoys from time to time from one agency to another. In order to have the record complete for your office, I have had this copy of record analyzed, and a statement of buoys shipped to each agency sent to the respective agents together with a circular letter from the deputy instructing them to send in a return showing the buoys and their serial numbers, which have been sent out by them to another agency, after having been received from Ottawa. When this is received I will send to you a copy. I inclose also the list by agencies of buoys sent from Ottawa (with the exception of the buoys and beacons sent to Victoria). This is extracted from the copy of record referred to. I think by giving you the information in this manner, it will enable you to follow clearly the movements of each gas buoy in the possession of the department.

*Extract from 'Copy of Records re Gas Buoys,' as Kept in the Commissioner of Lights Office to the 15th October, 1907.*

- |   |     |  |
|---|-----|--|
| 5 | 501 | Prince Edward Island, August 22, 1904, Prescott. |
| 7 | 2   | Parry Sound, September 30, 1904, Prescott.       |
| 7 | 3   | Amherstburg, October 3, 1904, Prescott.          |
| 9 | 4   | Nova Scotia, No. 9, December 31, 1904.           |

- 5 505 Parry Sound, stored Ottawa, March 14, 1905.
- 7 6 Nova Scotia, No. 7, February 22, 1905—new lantern support—October 1905.
- 7<sup>1</sup> 7 Nova Scotia, No. 7<sup>1</sup>, February 15, 1905.
- 7 8 Nova Scotia, No. 7, February 22, 1905.
- 9 Quebec, Quebec, February 25, March 2, 1906.
- 510 Quebec, Quebec, February 25, March 2, 1906.
- 1 Amherstburg, Quebec, February 25, March 2, 1906.
- 2 Parry Sound, Quebec, February 25, March 2, 1906.
- 3 Quebec, Quebec, February 25, March 2, 1906.
- 4 Quebec, Quebec, February 25, March 2, 1906.
- 7 5 New Brunswick, Quebec, March 31, 1906.
- 7 6 Goderich, Quebec, March 31, 1906.
- 7 Quebec.
- 8 Quebec.
- 9 New Brunswick.
- 520 New Brunswick.
- 1 Quebec.
- 2 Quebec.
- 3 Quebec.
- 4 Parry Sound.
- 5 Quebec.
- 6 Nova Scotia No. 7, July 3, 1905.
- 7 Prescott.
- 8 Prescott.
- 9 Parry Sound.
- 530 Parry Sound.
- 1 Parry Sound (lost).
- 2 Parry Sound.
- 3 Parry Sound.
- 4 Parry Sound.
- 5 Montreal—Kingston.
- 6 Prescott.
- 7 Prescott.
- 8 Prince Edward Island, No. 9 (Halifax), July 14, 1905.
- 9 Nova Scotia, No. 9, August 5, 1905.
- 540 Nova Scotia, No. 9, July 18, 1905.
- 1 Nova Scotia, No. 9, August 2, 1905.
- 2 Prince Edward Island, No. 9, (Halifax), July 27, 1905.
- 3 Nova Scotia, No. 9, July 20, 1905.
- 4 Prince Edward Island.
- 5 Prince Edward Island, No. 9 (Halifax), September 2, 1905.
- 6 Nova Scotia (lost), No. 9, September 23, 1905.
- 7 Nova Scotia, No. 9, September 18, 1905.
- 6 8 Prescott, Campbellton, January 31, 1906.
- 6 9 Prescott, Miramichi, February 3, 1906.
- 6 550 Lockerby Shoal, February 12, 1906, to Prescott, Lockerby Shoal, May 1906.
- 6 1 Montreal, Campbellton, January 31, 1906.
- 2 Vidal Shoal, received August 17, 1907, shipped S. St. M. for Vidal Shoal October, 1907.—Campbellton, January 31, 1906. (?)
- 6 3 Nova Scotia, February 12, 1906 to Prescott; Nova Scotia, March 8, 1906
- 6 4 Upper Turning Buoy, received August 17; shipped S. St. M. for Upper Turning Buoy, October 23, 1907; Miramichi, February 3, 1906.
- 6 5 Trenton Harbour, received June 20, 1907; stored at Kingston for Trenton harbour, Campbellton, January 31, 1906.

SESSIONAL PAPER No. 29a

- 6 556 Prescott, Campbellton, January 31, 1906.
- 6 7 Prescott, received August 17; in store, Campbellton, January 31, 1906.
- 6 8 Prescott, February 12, 1906; Nova Scotia, March 8, 1906; received again at Prescott.
- 11 600 New Brunswick to Halifax, March 16, 1906, arrived Halifax, March 24, 1906.
- 11 1 Nova Scotia to Halifax, March 16, 1906, arrived Halifax, March 1906. April 14—1 No. 11 for Halifax—no serial number.
- 11 2 Nova Scotia, April 5, 1906, Cape Canso, July 20, 1906 (in trouble) Hutchins report May 14, 1907.
  - 3 Nova Scotia, April 5, 1906.
  - 4 Nova Scotia, April 20.
  - 5 Nova Scotia, April 20.
  - 6 Nova Scotia, April 20.
  - 7 Nova Scotia, April 21.
  - 8 Parry Sound, May 11, 1 D. H.
  - 9 Parry Sound, May 11, 1 D. H.
- 570 Nova Scotia, May 23.
  - 1 Nova Scotia, June 11, 1906.
  - 2 New Brunswick, June 13, 1906; held to order of department. No trace of delivery.
  - 3 New Brunswick, June 13, 1906; held to order of department. No trace of delivery.
  - 4 Nova Scotia, June 20. Sambro, December 31, 1906 (in trouble—Hutchins report, 14/5/07).
  - 5 New Brunswick, June 13, held to order of department. No trace of delivery.
- 576 Nova Scotia, June 22, 1906. Held to order department.
  - 7 Nova Scotia, July 10, 1906.
  - 8 Nova Scotia, July 3, 1906.
- 11 9 Nova Scotia, July 30, 1906.
- 11 580 Nova Scotia, July 30, 1906.
  - 1 New Brunswick, Halifax, July 30, 1906.
  - 2 Nova Scotia, July 30, 1906.
  - 3 Nova Scotia, August 4, 1906. Egg Island, January 18, 1907 (in trouble Hutchins report 14/5/07).
  - 4 Nova Scotia, August 4, 1906.
  - 5 Nova Scotia, August 4, 1906.
  - 6 Ottawa. Dept. order August 4 received at Prescott August 28, 1906—shipped Ottawa July 13, 1907.
  - 7 Parry Sound. Dept. order August 4.
  - 8 Nova Scotia. Dept. order August 4.
  - 9 New Brunswick.
- 8½ 590 Nova Scotia. Invoice received and certified to be paid Aug. 9, 1906.
 

	1 Montreal	“	“	“	“
	2 Montreal.	“	“	“	“
	3 Montreal.	“	“	“	“
	4 Montreal.	“	“	“	“
	5 Nova Scotia.	“	“	“	“
	6 Quebec. September 18, 1906.	“	“	“	“
	7 Quebec, September 18, 1906.	“	“	“	“
	8 Quebec, September 20, 1906.	“	“	“	“
	9 Quebec, September 20, 1906.	“	“	“	“
	600 Quebec, September 21, 1906.	“	“	“	“
	1 Quebec, September 24, 1906,	“	“	“	“

8½	602	Quebec, Sept. 24, 1906.	Invoice received and certified to be paid Aug	
8½	3	Quebec, September 21, 1906.	"	"
8½	4	Quebec, September 27, 1906.	"	"
8½	5	Quebec, September 27, 1906.	"	"
8½	6	Quebec, September 26, 1906.	"	"
8½	7	Parry Sound.	"	"
8½	8	Parry Sound.	"	"
8½	9	Quebec, September 26, 1906.	"	"
8½	610	Parry Sound.	"	"
8½	1	Parry Sound.	"	"
8½	2	Parry Sound.	"	"
8½	3	Prince Edward Island.	"	"
8½	4	Nova Scotia.	"	"
8½	5	Port Arthur.	"	"
8½	6	Port Arthur.	"	"
8½	7	Port Arthur.	"	"
8½	8	Prescott.	"	"
8½	9	British Columbia spare.	"	"
8½	620	Thames River.	"	"
8½	1	British Columbia.	"	"
8½	2	British Columbia, spare.	"	"
8½	3	British Columbia.	"	"
8½	4	British Columbia.	"	"
14	5	Nova Scotia.		
11	6	British Columbia, January 19.		
11	7	British Columbia, January 19.		
8½	8	British Columbia, January 30—spare—superstructure, including bell away and lost.		
11	9	British Columbia, February 27, intended for spare.		
8½	630	British Columbia, January 30.		
8½	1	Prescott, shipped Prescott March 4, received March 19 and 20.		
8½	2	Montreal—Kingston, shipped Prescott March 4, received March 19		
8½	3	Prescott, shipped Prescott March 4, received March 19 and 20.		
8½	4	Montreal—Kingston, shipped Prescott March 4, received March 19		
8½	5	Montreal—Kingston, shipped Prescott March 4, received March 19		
8½	6	British Columbia.		
8½	7	Montreal—Kingston, Prescott March 19, 1906.		
8½	8	Montreal—Kingston, Prescott March 19, 1906.		
	9	New Brunswick.		
640		New Brunswick.		
	1	New Brunswick.		
	2	New Brunswick.		
	3	Montreal—Kingston.		
	4	Montreal—Kingston.		
	5	Montreal—Kingston.		
	6	Montreal—Kingston.		
	7	Montreal—Kingston.		
	8	Prescott.		
	9	New Brunswick.		
650		New Brunswick.		
	1	Montreal—Kingston.		
652		New Brunswick.		
	3	Montreal—Kingston.		
	4	Montreal—Kingston.		



7-8 EDWARD VII.,

- 9½ 709 British Columbia, damaged while being towed from Victoria.  
 710 British Columbia.  
 9½ 1 British Columbia, damaged while being towed from Victoria.  
 2 British Columbia.  
 3 British Columbia.  
 4 British Columbia.  
 5 British Columbia.  
 6 British Columbia.  
 7 British Columbia.  
 9½ 718 Parry Sound, substituted for 586, Prescott, 17 Aug.  
 9½ 9 Parry Sound, substituted for 586, Prescott, 26 Sep.  
 11 x 14½ 720 Nova Scotia, Blonde Rock, 26 Sep.

November 12, 1907.—Submarine Signal Company, Boston, to Commission  
 Lights, Ottawa: 'We are advised by the I. M. S. Co. that they have delivered  
 Canadian government since September 19, 1905, some 52 combined automatic g  
 whistling buoys, with receptacle for submarine bell attached, said receptacle  
 ordered attached to buoys by your department.

'Will you kindly advise this company as to whether the 52 buoys (as per in  
 list) were sold and delivered to the Canadian government by the I. M. S. Co.  
 or were part of them delivered to the (Canadian) government for trial purposes  
 In the event of any of these buoys not having been taken over by the depart  
 will you please state the number that the department has actually purchased.

'This information is needed as a voucher for our files, and we write you in  
 to the matter at the suggestion of the treasurer of the I. M. S. Co.



, A. 1908

SESSIONAL PAPER No. 29a

SUBMARINE BELL BUOYS.

Date of delivery.	Serial Number	Type Number	Shipped to.	Remarks.
1905.				
Sept. 19.	547	9	Halifax	
1906.				
March 16.	560	11	"	Destroyed March, 1906. New buoy shipped October 26, 1906.
" 16.	561	11	"	
" 31.	562	11	"	
April 5.	563	11	"	
" 19.	564	11	"	
" 14.	565	11	"	
" 19.	566	11	"	
" 21.	567	11	"	
May 3.	568	11	Depot Harbour.	
" 8.	569	11	"	
" 23.	570	11	Halifax	
" 31.	571	11	"	
June 26.	572	11	St. John, N.B.	
" 26.	573	11	"	
" 19.	574	11	Halifax	
" 27.	575	11	St. John, N.B.	
July 25.	576	11	Halifax	
" 4.	577	11	"	
" 12.	578	11	"	
" 30.	579	11	"	
" 30.	580	11	"	
" 25.	581	11	"	
" 27.	582	11	"	
August 4.	583	11	"	
" 4.	584	11	"	
" 4.	585	11	"	
" 27.	587	11	Prescott	
Oct. 26.	588	11	Halifax	
Sept. 19.	589	11	Levis, P.Q.	
1907.				
Jan'y 26.	625	10	Halifax, N.S.	
" 18.	626	11	Victoria, B.C.	
" 18.	627	11	"	
Feb. 27.	629	11	"	
March 27.	661	11	Halifax	
" 27.	662	11	"	
" 27.	663	11	St. John, N.B.	
" 27.	664	11	"	
April 22.	698	95	"	
July 20.	708	95	Victoria, B.C.	
" 20.	709	95	"	
" 23.	710	95	"	
" 23.	711	95	"	
" 23.	712	95	"	
" 25.	713	95	"	
" 25.	714	95	"	
" 25.	715	95	"	
" 26.	716	95	"	
" 26.	717	95	"	
Aug. 16.	718	95	Prescott	
" 16.	719	95	"	
Sept. 24.	720	11 x 145	Halifax	(Blonde Rock.)

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gas and  
le being  
  
nclosed  
o., Ltd.,  
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artment,  
  
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November 20.—Deputy to Commissioner of Customs *re* refund of custom to T. L. Willson for \$5,875.12.

November 20.—F. Gourdeau to F. P. Boucher, M. & F., Montreal-Ki Answer circular letter October 9 *re* gas buoys in your charge.

November 20.—F. Gourdeau to Jno. Cooper, lightkeeper, Port Arthur: my letter, October 10, *re* gas buoys in your charge.

November 9.—I. M. S. Co. to J. F. F., Commissioner of Lights: I t liberty of sending you herewith two copies of new catalogue which has just b lished by us.

*Gas Buoys Shipped to Montreal.*

Statement of gas buoys shipped to agency M. & F., Montreal (inclos agent's letter, November 21):—

Serial Number	Shipped to.	Type Number	Kind.	Date shi
591	English Bank. ....	8½ C	Gas	September 1
592	Curve III. ....	8½ C	"	" 1
593	"	8½ C	"	" 1
594	Pointe Lac Course. ....	8½ C	"	" 1
685	Curve II. ....	8½ C	"	April 5, 19
686	"	8½ C	"	" 5, 19
687	Curve I. ....	8½ C	"	" 5, 19
688	"	8½ C	"	" 5, 19
689	Isle au Raisin. ....	8½ C	"	" 8, 19
690	Hay Island. ....	8½ C	"	" 8, 19
551	Spare	6 C	"	Sept. 13, 19

The above all shipped to Sorel, P.Q.

Novemb. —J. Cooper, lightkeeper, Port Arthur, to deputy: 'Your te just received 6 p. m., and must say that I answered your letter 10th October 14th October, the following day after I received yours.

November 20, 1907.—J. Cooper, Lightkeeper, Port Arthur, to Deputy: Th numbers of buoys now in my charge are 615, 6, 7 of type No. 8½, returned to 527-8-9.

November 25, 1907.—Deputy to Agent Parry Sound: I have to request inform me what disposition has been made of the following gas buoys shipped follows: 511 from Quebec, 16 July, '06; 516 from Quebec, 16 July, '06; 53 Prescott, Ont.

November 25, 1907.—Deputy to St. John:—Similar letter as regards 515 from Quebec, 6 June, 1906; 536 from Prescott, Ont. With reference to seri you state that this is placed at c on Foul Ground, whereas the agent at Halifax that it is at Avon river, Minas basin. For Avon river you state that serial M is placed at this point. Kindly explain.

November 25, 1907.—Deputy to Charlottetown: Similar letter about M shipped to your agency from Halifax.

November 25, 1907.—Deputy to Halifax: Similar letter about No. 553 a to your agency from Prescott; No. 8 shipped to your agency from Prescott; M shipped to your agency direct by the I.M.S.Co.

With reference to serial No. 519, which you advise is placed at Avon riv John agent claims that this buoy is placed on Foul Ground, and that serial M is at Avon river. Kindly explain.

SESSIONAL PAPER No. 29a

*Buoys shipped to Prescott and reshipped to various stations.*

Statement of gas buoys shipped by the I.M.S. Co. to D.I.H.D. at Prescott, and afterwards reshipped to various stations:—

Type No. 5 —505, 530, 1, 2, 4, 550 to Parry Sound agency.	
538, New Brunswick.	
553, 8, Nova Scotia.	
533, Thames river, gas buoy.	
535, 7, Montreal to Kingston.	
501, shipped to Ottawa . . . . .	13
Type No. 7 —502, 3, shipped to Ottawa . . . . .	2
Type No. 8½—Montreal to Kingston . . . . .	32
639, 40, 1, 2, 9, 650, 2, 5, 6, New Brunswick agency . .	9
619, 21, 2, 3, 4, British Columbia . . . . .	5
669, Northport shoal . . . . .	1
620, Thames river gas buoy . . . . .	1
Type No. 9½—718, 9, Parry Sound agency . . . . .	2
Type No. 11 —587, Parry Sound agency . . . . .	1
6, shipped to Ottawa . . . . .	1
	67
On list, but shipped direct. (What numbers and types?) . . . . .	6
Total . . . . .	73

November 21, 1907.—W. H. Noble, Prescott, to Deputy Minister: With further reference to your letter October 9, enclosing a statement giving the serial numbers and types of the gas buoys shipped by the I.M.S. Co. to this department, I return herewith the list, which is correct. I also herewith give you a list showing where these buoys are.

November 22, 1907.—W. H. N. to Commissioner of Lights, Ottawa: 'I have to report that Mr. C. E. Stewart is leaving here on Monday with the 7.30 a.m. train. He has been instructed to proceed direct to your office, and if he finds you out of town I have instructed him to report to the manager of the I.M.S. Company.

November 5, 1907.—Telegram Jas. Gaudin, Vict., to J. F. F. C. of L: Two No. 11 type bell and whistle, 6 No. 9½ type, whistling, 2 No. 8½, bell, 6 No. 8½ gas buoys.

November 22, 1907.—Deputy to Gaudin, Telegram: 'Mail immediately complete list of gas buoys in service and held as spare to the 15 October, giving serial number of each.

*B. C. Buoys.*

November 23, 1907.—Gaudin to Deputy: Your telegram 22nd inst., and agreeably to your instructions you will please find inclosed herewith separate lists of the gas buoys established up to the 15th ulto. Those placed since that date, or about to be placed in position, also a list of spare buoys in stock.

You will find the serial number of each gas buoy with the exception of the buoy on Alfred Reef, which Mr. Halkett has overlooked, recorded in the sheet provided for that purpose. The serial numbers of the buoys for Dall Patch and Hodgson Reef will be submitted to you as soon as I can get them from the Wm. Jolliffe, when they have been placed.

The No. 9½ and 11½ type buoys are moored in Esquimalt harbour, the weather was so stormy that I was unable to send a boat out to ascertain the serial number of each of these buoys.

I beg to call to your attention that numbers of our buoys are changed often for instance, a spare buoy may be placed in Kestrel or any other rock to one taken up for cleaning and refilling, and then moved to the next station the serial number will be changed each time the buoys are taken up.

The spare buoys Nos. 709 and 71 were damaged by stranding when away from the tug that was towing them from Vancouver to Esquimalt. This is not extensive and can be permanently repaired. The Kelp Bar buoy (C) recently run over by a boom of logs, carrying away the superstructure, which present has not been recovered. This buoy has been replaced by another. This has not yet been reported by Mr. Halkett. On the 14th inst., a corrected list of buoys and beacons established in these waters was mailed to the department.

November 23, 1907.—List of spare buoys under the B. C. agency: No. 622, No. 8½; No. 694, No. 8½; No. 628, No. 8½ (superstructure, including carried away and lost). No number No. 11½; 709, No. 9½; 711, No. 9½. (These damaged by stranding whilst being towed from Victoria.) — No. 9½; —

November 23, 1907.—List of buoys established subsequent to 15th Oct.,

New England rock, 716, No. 9½, 8 Nov., '07.

Skidegate bar, 707, No. 8½, 10 Nov., '07.

Dall Patch, —, No. 9½, is being placed.

Hodgson reef, —, No. 9½, is being placed.

Barrett ledge, 621, No. 8½, 30 Jany., 1907.

Bird rock, 623, No. 8½, 2 Feby., 1907.

Kestrel rock, 624, No. 8½, 2 Feby., 1907.

Ellinor rock, 630, No. 8½, 16 April, 1907.

Comox bar, 628, No. 8½, 2 April, 1907.

Swiftsure bank, 627, No. 11½, 24 Aug., 1907.

Vancouver rock, 713, No. 9½, 1 Oct., 1907.

Port San Juan, 710, No. 9½, 21 Sept., 1907.

Kyuquot, 708, No. 9½, 24 Sept., 1907.

Haddington reef removed from Ledge reef, 636, No. 8½, 1 Oct., 1907.

Sands Heads, 626, No. 11½, 30 Aug., 1907.

Alford reef (No. not reported), No. 8½, 7 Oct., 1907.

November 27, 1907.—Deputy to Asst. Commissioner of Lights (Present advised by the I.M.S. Company (see folio —).

November 27, 1907.—W. H. N. (A. B.) to J. F. F.: Have to inform C. E. Stewart intends leaving for Ottawa to-morrow morning and will report office on his arrival.

November 29, 1907.—To Deputy Minister: Reference to your letter re buoys received from I.M.S. Company, the serial numbers of which in your letter, I have the honour to report where these buoys are as follows:

Type No. 5, serial No. 527 and 8, in yard at D.L.H. Depot.  
529 and 533 shipped to Parry Sound agency.  
535 and 6, gas buoys at Montreal-Kingston I.  
537, in yard at D.L.H. Depot.  
Type No. 6, serial No. 548, gas buoy Montreal-Kingston Div.  
549, in yard at D.L.H. Depot.  
551, shipped to Sorel for Montreal agency,  
559, in yard at D.L.H. Depot.

December 2, 1907.—I. M. S. Company to Deputy: As requested in of November 20th, your file 27858, we beg to inclose you herewith copies of papers submitted to the Department of Customs in connection with the T. L. Willson for refund of customs duties paid upon materials that buoys and beacons supplied to your department.

## SESSIONAL PAPER No. 29a

We might mention that it would be necessary for you to attach a copy of your letter to the Commissioner of Customs in the matter to the papers sent you to complete the record.

December 4, 1907.—St. John, N.B., to Deputy: Replying to your letter 25th ulto., requesting information in re gas buoys 515 and 536, I beg to report that on 14th June, '06, the steamer *Lansdowne* placed at the Avon river a gas buoy No. 7, 519. This buoy was picked up by *Lansdowne*, 13th Dec., '06, and brought to St. John and replaced in position again April 16, 1907, by gas buoy type No. 7,515. This buoy is in its position at the present time.

In regard to the No. 536, I have not this buoy on my list. I am under the impression that it was sent direct to Shediac and placed on Zephyr rock, Shediac harbour. The serial number was not given at the time. I have written Mr. Lord, and will advise you at a later date as to the number. The Charlottetown agency looks after this buoy.

*St. John.*

December 5, 1907.—St. John: List of the gas buoys at this agency:—

- No. 11, 664, gas and whistling buoy, off Point Lepreaux.
- No. 11, 572, gas and whistling buoy, Old Proprietor ledge.
- No. 11, 573, gas whistling buoy, North Wolf.
- No. 11, 575, gas and whistling buoy, Northwest ledge.
- No. 11, 663, gas and whistling buoy, Southwest ledge.
- No. 11, 589, gas and whistling buoy, to be placed at Old Proprietor, first opportunity.
- No. 9, 539, gas and whistling buoy, at Ballast wharf, St. John.
- No. 9½, 698, gas and whistling buoy, 1 mile off Partridge island.
- No. 8½, 674, gas and bell buoy, Hen and Chickens shoal.
- No. 7, 520, gas buoy, Foul Ground, St. John harbour.
- No. 7, 515, gas buoy, Avon river, N.S.
- No. 7, 519, gas buoy, at Ballast wharf, St. John.

*Campbellton.*

- No. 8½, 639, gas buoy, on Traverse.
- No. 8½, 640, gas buoy, Middle ground below Dal. point.
- No. 8½, 642, gas buoy, Big Battery point.
- No. 8½, 649, Point Le Garde.
- No. 8½, 650 gas buoy, Point Prim (north).
- No. 8½, 641, gas buoy, Point Prim (south).

*Miramichi.*

- No. 8½, 652, gas buoy; at Chatham (spare).
- No. 8½, 655, gas buoy, at Fairway.
- No. 8½, 656, gas buoy, at Dredge.

December 2, 1907.—Halifax to agent—Marine and Fisheries, Halifax: Referring to departmental letter 25th inst., requesting to know what disposition was made of gas buoys Nos. 553, 558 and 720, beg to say that 553 and 8 were shipped from here March 8th, 1907, to T. L. Willson, Ottawa, in accordance with instructions received from the department, dated 29 Nov., '06. Buoy 720 now at dockyard will be placed on the outer automatic station off Halifax harbour, replacing No. 625, which will be brought in and put in order for Blonde rock. Buoy No. 519 was placed at Avon river 14 June, '06, and I understood the same buoy was replaced this year by the N. B. agency.

December 5, 1907.—Charlottetown to Deputy: Re buoy No. 547, shipped to this agency by the Halifax agency. It was sent by the agent, Mr. J. Parsons, to Pictou by

I.C.R., and was taken from Pictou by steamer *Stanley*, and placed at Indian rock depot, 15 June, '07.

December 12, 1907.—Prescott (A. B.) to J. F. F.: Ref. to Mr. White's telephone of to-day re serial numbers of buoys :

501 and 2 shipped to the I. M. S. Co., Ottawa, 30th October, 1906, and have not been returned here.

503 shipped to the I. M. S. Co., Ottawa, 30 Oct., 1906, and received back at the depot, 11th September, 1907. It was then reshipped to Amherstburg., 7th October, 1907.

505, 530, 532 shipped to Parry Sound 23rd April, 1906.

550 shipped to Lockerby shoal, P. S. district, 11th May, 1906.

552 and 54 shipped to Sault Ste. Marie for Vidal shoal and Turning point, 23 October, 1907.

553 and 555 shipped Nova Scotia agency, 8th March, 1906.

555. This was placed in Trenton harbour by *C. G. S. Scout*, 12th July, 1907, was lifted a week or so ago at close of navigation, and is lying at Kingston to be placed again at Trenton on opening of navigation.

556. On Montreal-Kingston division, gas buoy No. 6T.

557. Lying in our yard here.

December 19, 1907.—I. M. S. Co. to Deputy: Referring to our letter 13th December, we inclose herewith invoice in triplicate for \$2,021.50, amount of freight charges paid the G. T. Ry., on ten No. 7½ beacons, forwarded to Captain Gaudin, Victoria, B.C.; also duplicate paid expense bills. Kindly send us cheque to cover this amount at your earliest convenience.

December 20, 1907.—Deputy to M. Brais, M. and F., Parry Sound: 'Rush answer my letter, 25th ulto. re gas buoys.'

December 20, 1907.—M. Brais to Deputy: In reply to your letter 25th November respecting disposition of following gas buoys: No. 511 from Quebec, shipped 16th July, 1906. Gas buoys No. 6 from Quebec, shipped 16th July, 1906. Gas buoys No. 531, from Prescott, Ont., 16th July, 1906. Of the above number 531 is the only buoy registered here and the same was frozen in at Three Star shoal last season and lost.

The following numbers are the remaining type: Five automatic buoys in service here in the year 1906—530, 532, 4, 550. These have been dry-docked at Depot Harbour and are to be shipped to the International M. S. Co., Ottawa, during the winter. This shipment will have my early attention.

December 20, 1907.—(Recd December 26, 1907.)—Victoria to J. F. F., C. of L. With reference to the paragraph in my letter 23rd ulto. relating to the No. 9½ buoy serial Nos. 709 and 711 damaged by stranding whilst in transit from Vancouver to Victoria. I have the honour to report that with Mr. J. A. Thompson, inspector of steamboats, these buoys have been inspected. It is found that the lower part of No. 711, where the bottom is secured to the side, is indented so as to involve the necessity of a patch. No. 709 is also indented, but not to such an extent that it will require repairs. I beg to request that you will please advise by telegram as to amount of pressure these buoys are to be tested before they are used.

December 28, 1907.—J. F. F. to Victoria: Telegram—After repairs test buoys to 12 lbs. air pressure, and use soap suds to detect leaks.

December 28, 1907.—Letter confirming above and acknowledging letter 20th inst.

December 30, 1907.—Charlottetown to Deputy: There are at this agency the following gas buoys:—

Indian Rocks, combined gas and whistler, No. 542.

Point Prim, combined gas and whistler, No. 538.

Fitzroy Rock, combined gas and whistler, No. 544.

Miscouche shoal, black buoy, No. 545.

## SESSIONAL PAPER No. 29a

There is also one spare black gas only buoy not in use. Kept as spare serial No. 613, built 1906. With this buoy there are two lanterns to suit one No. 2282, 100 m/m, and one No. 2284, 100 m/m.

There are two of the five lanterns in use last season which will have to be sent to be repaired. I will have them boxed up and shipped as soon as I get notice where to address them. There is also a black buoy, gas only, serial No. 501 in charge of this agency, but strictly belonging to the N.B. agency. This buoy is placed in Shediac Bay to mark the Zephyr Rock, and since its establishment has been handled by our steamer *Stanley*, and each fall has been brought to Charlottetown, cleaned, painted and refilled and placed again in the spring. The expenses in connection with cleaning, painting, filling, &c., are chargeable at this agency against the N. B. agency.

January 9, 1907.—C. Koenig, superintendent buoys service, Quebec district to J. F. F., C. of L.: According to your instructions I have marked all the gas buoys and their descriptions for the Quebec district on two separate charts which I am sending you to-day under separate cover. I did not mark the buoys on the charts you mentioned, because at the time you were here I did not think to tell you that the former charts sent to Ottawa were the same as the ones I send you to-day. As the two sheets cover the St. Lawrence river from Montreal to Father Point, I think it will be more handy for you to have the buoys marked on these charts. Hoping that this will be satisfactory.