

241

MC

Box 3 Folder 8

General Electric Company, 1932-41

GENERAL  ELECTRIC
COMPANY

RESEARCH LABORATORY

1 River Road
SCHENECTADY, N. Y.
February 6, 1941

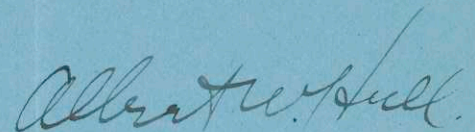
Professor Wayne B. Nottingham
Department of Physics
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Professor Nottingham:

As you may have guessed, defense work has completely eclipsed our research program, including the special dispenser cathode which I have promised many times to try to make for photoelectric study. My interest in such a study is still high, but the chance that we shall be able to do anything about it this year is so dim that I am writing this letter by way of apology to the student who was to undertake this research, so as to allow him to proceed with some other problem--which I suspect he is already doing.

Professor Schlichter has told me of the excellent work you are doing on the amplification of direct currents, and I hope before long to see you and learn more about it.

Sincerely yours,



AW Hull:K

Assistant Director
RESEARCH LABORATORY

February 20, 1941

c
Mr. Sidney Shein
Incandescent Lamp Department
Cleveland Wire Works
1331 Chardon Road
Euclid, Ohio

Dear Mr. Shein:

It has been some time now since I last communicated with you, but during this period we have still been intensely interested in the properties of tungsten principally from the point of view of being able to grow relatively large crystals with as few defects as possible.

Quite a number of students have been working in this field as preliminary steps to their thesis work. We think we have learned a great deal and yet we also realize how much more there is to be known. One of my students, Mr. James Buck is particularly interested in extending these studies and has asked me to write to you asking for such samples as you would be in a position to furnish us of wire which you think might be best suited for this work, preferably wire which is selected to be free from folds and other defects and as uniform in its properties as is reasonably possible.

I would suggest possibly 200 metres of .007 inch No. 218 and about the same length of approximately .005 inch. If it is possible to furnish these cleaned and wound on fairly large diameter spools, it would make our final polishing, which we do on our machine you remember, somewhat easier to control.

If you have any suggestions as to a more suitable wire for this investigation, I would certainly like to profit by them.

Mr. Sidney Shein
February 20, 1941

-2-

We have not reported to you directly concerning the results which we have so far obtained, but I can assure you that in case you happen to be visiting in this neighborhood we would appreciate the opportunity to talk over some of our results with you.

If there are any charges connected with the supplying of this wire to us, I shall be glad to send a confirming order to cover them.

Very sincerely yours,

Wayne B. Nottingham
Associate Professor of Physics

WBN T

LAMP DEPARTMENT
GENERAL  ELECTRIC
COMPANY

CLEVELAND WIRE WORKS
B. L. BENBOW, MANAGER

"The sale of parts or materials by us confers on the purchaser no license under any patent rights of the General Electric Co. covering or relating to the structure of any electrical devices to which the parts or material may be applied or in connection with which they may be used or covering or relating to the materials, machines or processes used in the manufacture of any such electrical devices."

1331 CHARDON ROAD
EUCLID, OHIO

February 26, 1941

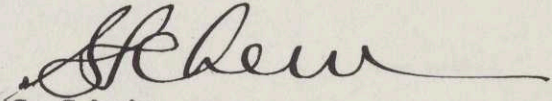
Dr. Wayne B. Nottingham
Massachusetts Institute of Technology
Cambridge, Mass.

Dear Dr. Nottingham:

In reply to your letter of February 20th regarding 7 mil and 5 mil tungsten wire, I believe that we can supply you with this material on bands $\frac{1}{4}$ " in diameter. This I believe is similar to the manner in which we formerly supplied you with other tungsten wires.

Since we are particular as to the deposition of our tungsten wire, I suggest that you send us an order addressed to Mr. D. C. Hughes, Nela Park. He will then forward us the proper shop order and we will send you the wire that you desire. We will take particular pains to insure that you get wire as free from all defects as is possible.

Very truly yours,



S. Schein
Lamp Dept. of G. E. Co.
CLEVELAND WIRE WORKS

SS:MM

January 2, 1941

Dr. Lewi Tonks
Research Laboratory
General Electric Company
Schenectady, New York

Dear Lewi:

Dr. John Daniel did his Doctor's thesis on the subject of field emission from wires and points. I have a copy of his thesis which I would be glad to loan you for a short period of time, but I have just finished reading the manuscripts of three papers which he has written and is about to send in for publication, and it might be possible to borrow these for a few days before he sends them. If you care to write him, his address is

Dr. John H. Daniel
U.S. Public Health Service
National Institute of Health
Bethesda, Maryland.

I will postpone sending you a copy of his thesis until I hear from you. I think that the papers would be more readable than the thesis in case you can borrow them.

We enjoyed the genuine woodsy character of your Christmas greeting and thank you very much.

Sincerely yours,

Wayne B. Nottingham
Associate Professor of Physics

WBN:W

GENERAL  ELECTRIC
COMPANY

RESEARCH LABORATORY

1 River Road
SCHENECTADY, N. Y.

Dec. 31, 1940

Dr. W. B. Nottingham
Dept. of Physics
Mass. Inst. of Technology
Cambridge, Massachusetts

Dear Wayne:

Dr. Charlton tells me that you and Daniels have recently written a paper on cold cathode emission from surfaces treated in various ways. I should appreciate greatly having an opportunity to look over your results as a guide to some high voltage work that I am doing in which I am bothered by cold cathode emission.

We enjoyed receiving your Christmas card and extend the same wishes to you and your wife.

With very best regards, I remain,

Sincerely yours,

L. T. Tonks

LTonks:H

P.S. Lafferty, who was here last summer & is now at Michigan will probably write you shortly about metals to use in building a tube, and their handling & treatment. I'm guilty.
L.T.

GENERAL  ELECTRIC
COMPANY

RESEARCH LABORATORY

1 River Road
SCHENECTADY, N. Y.

October 17
19 40

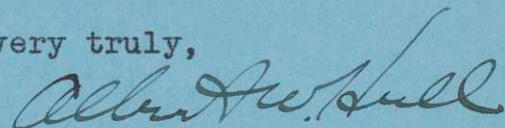
Dr. W.B. Nottingham
Department of Physics
Mass. Inst. of Technology
Cambridge, Mass.

Dear Dr. Nottingham:

I am sending you today under separate
cover a sample of the 1 mil thoriated tungsten wire
for which you asked.

Please accept this with our compliments.

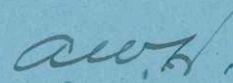
Yours very truly,



ASSISTANT DIRECTOR
RESEARCH LABORATORY

*P.S. We shall use wire from this same spool
for our laboratory - made F.P. 54's.*

AWHull L



October 15, 1940.

Dr. A. W. Hull
Research Laboratory
General Electric Co.
Schenectady, New York

Dear Dr. Hull:

It was good to see you and to have a chance to talk about the phototube and also about the need for better FP54 tubes. I have talked over our plans with Mr. Herman Affel, who is the student planning to undertake this investigation, and he is very much interested in your new FP54's. I am sure that we would like to cooperate in any way that we can in the testing of these tubes, and in making comparisons between them, the old FP54's, and the ones we intend to build.

Our present source of thoriated tungsten wire is largely the Westinghouse Electric and Manufacturing Co. Before talking with you, it was my idea that I would write to Westinghouse and obtain a suitable supply of 1 mil wire; however, since you have expressed an interest in the study, you might be willing to furnish us with a supply of the same wire which you use in your tubes. In order that we might have an adequate supply for other things as well, a spool of 50 to 100 meters would be very useful. If it is not convenient to let us have this, please let me know, since I am reasonably sure I can get suitable wire through other channels.

I should think that for making comparative tests we should receive at least two of the new FP54's. In case you send them and we make measurements, we shall keep in close touch with you concerning all results obtained.

Very sincerely yours,

Wayne B. Nottingham
Associate Professor of Physics

WBN:W

October 9, 1940

Dr. A. W. Hull, Assistant Director
Research Laboratory
General Electric Company
Schenectady, New York

Dear Dr. Hull:

I hope that my delay in replying to your letter of September 5 will not have caused you any inconvenience. I am inclined to think that it would do no harm at all to have the mercury vapor present even after the activation, especially if it were possible to have attached to the tube an appendix which could be immersed in liquid air. This would permit a considerable greater flexibility in operation, since at any time mercury could be readmitted to the tube by removing the liquid air.

If your tube has not already been built, I would like to suggest this modification in our plans; if it has been built, please disregard this suggestion and follow whatever scheme you consider best.

I am planning to attend the Electronics Conference at Hoboken and in case you are also present, I shall be looking forward to discussing this problem with you.

Very sincerely yours,

Wayne B. Nottingham
Associate Professor of
Physics

WBN:W

GENERAL  ELECTRIC
COMPANY

RESEARCH LABORATORY

1 River Road
SCHENECTADY, N. Y.

September 5, 1940

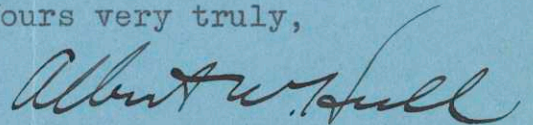
Dr. W.B. Nottingham
Bolton Landing
Lage George, New York

Dear Dr. Nottingham:

I have delayed answering your letter, since we are so busy that it seemed questionable whether I could find time to do further work on the dispenser.

However, I am so anxious to study it that I am glad of this added incentive, and I will try to get something started. I remember your comment that you would not object to the presence of mercury. It may be that I can freeze out the mercury vapor and seal it off after activation.

Yours very truly,



ASSISTANT DIRECTOR
RESEARCH LABORATORY

AWHull L

*write about
Oct 1.*

December 3, 1940

Mr. Dale C. Hughes
Lamp Department
General Electric Company
Nela Park
Cleveland, Ohio

Dear Mr. Hughes:

We recently ordered some tungsten lead-in wires on our order #5963. These were shipped to us on the tenth of October and we have been using them and experiencing a great deal of trouble. We did not recognize our trouble at first and were inclined to blame the glass blower for our difficulties, owing to the fact that so many leaks were being observed in the experimental tubes which we have lately produced.

Although when we examined these tungsten wires with a low power microscope, we found not indication of the crack which existed, we were forced to the conclusion that the wires were the source of our trouble. We therefore polished a number of these wires electrolytically and found a crack which extended almost half way through the wire and is perfectly visible to the naked eye after the etching. This shows that the difficulty we have been having may be traced directly to your lack of proper inspection of this wire.

To try to impress you with the seriousness of such failure, I would estimate that time and effort costing us some hundreds of dollars have been wasted simply because we had too much confidence in the reliability of your inspection. I am enclosing herewith about forty of the one hundred lead-in wires which we recently received, all of which contain this crack. Most of the other wires were used in tubes which failed in their proper function.

I would say that the least you can do to compensate us for this loss is to replace the one hundred wires 2" in length and .050" in diameter at no cost to us.

I hope that you will exercise the ^tstrangest possible pressure on your inspection department so that this

Mr. Dale C. Hughes

-2-

December 3, 1940

situation will be avoided in the future. It is obvious that other users of these wires are likely to be subjected to even greater loss than we have experienced before they discover such flaws in your products.

Very truly yours,

Wayne B. Nottingham
Associate Professor of Physics

WBN:W

December 10, 1940

Mr. Dale C. Hughes
Lamp Department
General Electric Company
Nela Park
East Cleveland, Ohio

Dear Mr. Hughes:

I am very sorry that we did not specify that the tungsten wire which we ordered on order #5963 was to be used for sealing into glass. I think it has been our practice to mention this in the past and that it was overlooked in this particular instance. We shall be sure to show that specifically on all future orders.

I am accepting your suggestion that we return the fifty .040" and fifty .060" wires which you furnished on our order #5963. I feel reasonably certain that these wires are all right; on the other hand, I am sure that we will appreciate your replacing them with wires which have been inspected and passed as suitable for sealing into glass.

Our present supply of all wire is now very small and I would appreciate your sending us at your earliest convenience the replacement pieces.

I want to thank you for giving this matter your prompt attention.

Very sincerely yours,

Wayne B. Nottingham
Associate Professor of Physics

WBN:W

LAMP DEPARTMENT
GENERAL  ELECTRIC
COMPANY

"The sale of parts or materials by us confers on the purchaser no license under any patent rights of the General Electric Co. covering or relating to the structure of any electrical devices to which the parts or material may be applied or in connection with which they may be used or covering or relating to the materials, machines or processes used in the manufacture of any such electrical devices."

NELA PARK
CLEVELAND, OHIO

December 6, 1940.

Mr. Wayne B. Nottingham,
Associate Professor of Physics,
Massachusetts Institute of Technology,
Cambridge, Mass.

Dear Mr. Nottingham:

In answer to your letter of December 3rd, Order No. 5963 which you sent us made no mention of the fact that the wire was to be used for leads, and in the lengths in which it was ordered, we did not have the least suspicion that this was the use to which it would be put. Rarely do we furnish pieces as long as 2" for such purposes.


We have a very much more careful inspection for tungsten wire which is to be used for leads than is normally given to tungsten either black, cleaned, or ground. There are so many different things that tungsten of this kind is used for where the very careful lead inspection is not required that we go to the added expense of making the very careful inspection only when we are told that the wire is to be used for leads, and usually when it is to be used for leads, we are asked to make the pieces relatively short.

I think that you will have every right to have confidence in our inspection when the wire is inspected particularly for use in seals, and we would like permission to replace the 100 pieces 2" long and .050" in diameter, and to suggest that you return the other two items you received on Order 5963 if they are to be used for leading-in pieces, as none of the three items which were shipped to you were given this inspection, and we would not wish you to try to use the other sizes, for you probably will encounter difficulty with them if you do.

Very truly yours,

DALE C. HUGHES


DCH:LW
cc GC
REC

WESTINGHOUSE  LAMP DIVISION
WESTINGHOUSE
ELECTRIC & MANUFACTURING COMPANY
BLOOMFIELD, N. J.

November 29, 1940.

*

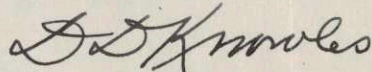
Dr. Wayne B. Nottingham
Department of Physics
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Dr. Nottingham:

At Dr. Rentschler's request we are sending you two RH-507 electrometer tubes for the experimental work which you mentioned when you and your group were here recently. We have taken complete characteristics on these tubes and the data will be included with the tubes. We will of course be glad to answer any special questions you have in regard to these tubes and will also appreciate any information which you care to give us after you have used them.

While your group was here Mr. Hocker expressed some interest in our lead wires consisting of a section of tungsten wire welded to a flexible cable made up of nickel coated copper wire. We recently selected a few samples which I thought conformed to his wishes and our Sales Department sent them to him for his examination. We make so many leads of this type that we may not have picked the best samples so that if there is any thing of that kind that you are interested in we shall always try to accommodate you.

Yours very truly,



D. D. Knowles
Special Products Engg. Dept.

DDK:klm

cc: Drs. H. C. Rentschler
J. W. Marden

*Every House
needs*
Westinghouse

PACKING LIST

INCANDESCENT LAMP DEPARTMENT

GENERAL ELECTRIC

COMPANY

CLEVELAND WIRE WORKS

1331 Chardon Road, EUCLID, OHIO

10-10-40

To Massachusetts Institute of Technology
W.B. Nottingham - Room 6-205
Cambridge, Mass.

Your Order No. 5963

CONTENTS	
50	2" lgths .040" dia cleaned, ground SW Tungsten wire .043 kgs
100	2" " .050" ditto $\frac{1}{2}$.141 "
50	2" " .060" ditto .093 "
	1 Pkg 2.87
	via P.P. 7.18
	3.68
	13.73
	Contingency 2.00
	pp .14
	<u>15.87</u>

LAMP DEPARTMENT
GENERAL  ELECTRIC
COMPANY

"The sale of parts or materials by us confers on the purchaser no license under any patent rights of the General Electric Co. covering or relating to the structure of any electrical devices to which the parts or material may be applied or in connection with which they may be used or covering or relating to the materials, machines or processes used in the manufacture of any such electrical devices."

NELA PARK
CLEVELAND, OHIO

March 5, 1940.

Mrs. Williams

~~Mr. W. A. Hokanson, Assistant Bursar,~~
Massachusetts Institute of Technology,
Cambridge, Mass.

Dear Mr. Hokanson:

We have just received from our Cleveland Wire Works, your Order No. 1664 calling for SW tungsten wire, and note that it was addressed directly to them.

May we call your attention to the fact that all orders and correspondence concerning orders should be addressed directly to my attention, Administration Dept. of Lamp Dept. of General Electric Co., Nela Park, East Cleveland, O. All such matters have to come through this office first, so if they are properly addressed, much time is saved. ✓

Very truly yours,

DCH:LW
cc JB

DALE C. HUGHES

Dale C. Hughes
JW

PACKING LIST

INCANDESCENT LAMP DEPARTMENT

GENERAL  ELECTRIC

COMPANY

CLEVELAND WIRE WORKS

1331 Chardon Road, EUCLID, OHIO

To Mass. Institute of Technology

Cambridge, Mass.

Your Order No. 1664

		CONTENTS		
				4.18
100	Pcs. .2" x .040" Dia. Cleaned Ground SW Tungsten Wire-			78 Grams.
100	Pcs. .2" x .050" Dia. ditto	ditto		126 Grams.
100	Pcs. .2" x .060" Dia. "	"	"	182 Grams.
				<u>6.59</u>
				16.29
			Labon	3.00
			PP	14
				<u>19.43</u>

GENERAL  ELECTRIC
COMPANY

GENERAL OFFICE
SCHENECTADY, N. Y.

1 River Road
SCHENECTADY, N. Y.
December Twenty-First
1939

Professor Wayne B. Nottingham
Department of Physics
Massachusetts Institute of Technology
Cambridge, Mass.

Dear Professor Nottingham:

In response to your letter of the 15th,
you may consider that neither the use of these
special glasses nor their identification is con-
fidential.

I am sure that the Corning Glass Company
is willing to sell this glass freely and advise
on its use.

Very truly yours,

W.C. White, Engineer
VACUUM TUBE ENGINEERING DEPARTMENT

WCWhite:EW

December 15, 1939.

Mr. W. C. White
Vacuum Tube Engineering Department
General Electric Company
Schenectady, New York

Dear Mr. White:

The glass which you so kindly selected for us was received a few days ago in good condition. I want to thank you for helping us out in this matter and will report our progress to you in case we are successful in the use of this glass.

In order not to have any misunderstanding, I would appreciate it if you would tell me whether or not the use of these glasses for graded seals is considered a confidential matter. If it is considered so, I shall be glad to cooperate in attempting to keep it that way.

Very truly yours,

Wayne B. Nottingham
Assoc. Prof. of Physics

WBN:W

GENERAL  ELECTRIC
COMPANY

GENERAL OFFICE
SCHENECTADY, N. Y.

1 River Road
SCHENECTADY, N. Y.
December Eighth
1939

Professor Wayne B. Nottingham
Department of Physics
Massachusetts Institute of Technology
Cambridge, Mass.

Dear Professor Nottingham:

I have been requested to answer your letter of the 4th to Dr. Coolidge relative to quartz-to-pyrex graded seals.

We are sending you under separate cover some samples of glass cane that is used for this purpose. The small diameter cane is Corning glass 707GS and this is used to seal next to the quartz. The larger diameter sample of cane is Corning 715A0 glass which is used between the 707GS and the pyrex. We utilize about a $3/16$ " width band of each of these two special glasses for tube diameters between $1/2$ " and $3/4$ ". I believe that further quantities of these glasses can be obtained directly from the Corning Glass Works.

Very truly yours,

W. C. White, Engineer
VACUUM TUBE ENGINEERING DEPARTMENT

WCWhite:EW

December 4, 1939.

Dr. William D. Coolidge
Research Laboratory
General Electric Company
Schenectady, New York

Dear Dr. Coolidge:

I again want to thank you on behalf of my students and myself for the very successful inspection trip which you arranged for us in November. All of the men greatly appreciated the opportunity of meeting you and your colleagues and to learn of the many new and interesting results you have obtained recently.

While I was visiting with Mr. Ruggles, he showed me some very beautiful quartz-to-pyrex graded seals, the development of which you are undoubtedly familiar. A number of years ago while I was at the Bartol Research Foundation, the glass blower and I experimented with the making of graded seals, using glass which we compounded out of pyrex and quartz. We made these in sizes up to an inch, and although they were not beautiful to look at, were perfectly satisfactory.

Here at the Institute we have many occasions to use graded seals in connection with our research, and would like very much to be in a position to make our own with less effort than we had to expend in connection with my work at the Bartol. If it does not represent too excessive an expense, nor violate any of your "industrial secrets," I think we would be greatly helped in our work if we could obtain a small amount of the glass which you use for the grades between quartz and pyrex. If you do not have a sufficient amount of glass to be able to let us have some, but are willing to let us make seals with it, it might be possible for us to get a supply direct from Corning, either through you or independently.

I understood from Mr. Ruggles that your work in this connection was still in the development stage and I can very well understand that if you do not want to divulge the methods of using this glass, or the kinds of glass which you are using, we

Dr. William D. Coolidge

-2-

December 4, 1939.

can get along with the very much cruder approach which we already know, until such time as you are able to help us out.

I hope this is not asking too much; if it is, do not hesitate to say so.

Sincerelyyyours,

Wayne B. Nottingham
Assoc. Prof. of Physics

WBN:W

October 16, 1939.

Mr. R. D. Mailey
General Electric Vapor Lamp Co.
410 Eighth Street
Hoboken, New York

Dear Mr. Mailey:

During the first week in October, 1932, Dr. Compton wrote you concerning the possibility of our getting a collection of Quartz-to-Pyrex joints to further our research for some years following. On October 11 you wrote him giving a quotation for these, which we greatly appreciated and forthwith ordered in accordance with your letter.

We have now practically depleted this stock of Quartz joints and wonder whether or not we can again arrange for a supply to be furnished at a cost comparable with that which you gave us in 1932. Our present plans, I think, would call for the following list:

7	joints	Quartz-to-Pyrex	1"	I.D.
8	"	"	3/4"	"
6	"	"	1/2"	"
4	"	"	1/4"	"

If you can possibly arrange to furnish us with these joints, I would appreciate receiving your quotation and an indication as to when this order might be available.

Very sincerely yours,

Wayne B. Nottingham
Assoc. Prof. of Physics

WBN:W

LAMP DEPARTMENT
GENERAL ELECTRIC
 COMPANY

NELA SPECIALTY DIVISION
 CHARLES F. STREBIG, MANAGER

410 EIGHTH STREET
 HOBOKEN, N. J.

November 27, 1939

Massachusetts Institute of Technology
 Department of Physics
 Cambridge, Mass.

Attention: Prof. Wayne B. Nottingham

Gentlemen:

Your letter of October 16th to Dr. Mailey has been referred to this Division since we were organized, effective November 1st, to exclusively handle the sale of specialty quartz apparatus, as well as glow lamps, Kon-nec-tor mercury switches and mercury and sodium Lab-Arcs, for the Lamp Department of the General Electric Company.

We have reviewed the prices made to you on quartz-to-pyrex seals on our order G.O. 265511 dated October 25, 1932 and find that we cannot at this time duplicate those prices.

However, we have figured our lowest possible prices to you on the quartz-to-pyrex seals you now require and I am pleased to quote you as follows:

7	7 Joints Quartz-to-Pyrex 1" I.D.	\$25.75 ea.	\$180.25
7	8 " " 3/4" "	19.00 ea.	152.00
2	6 " " 1/2" "	12.50 ea.	75.00
4	4 " " 1/4" "	5.25 ea.	21.00
	Total price for the lot		<u>\$428.25</u>

The above prices are net in any quantity. Shipments are F.O.B. Hoboken, N. J. and terms of payment are 30 days net. We can make shipment of these seals within from three to four weeks after receipt of your order.

Trusting that we may be favored with your requisition for this material and that we can be of further service to you, we are

Very truly yours,

W.C. Duff
 W. C. Duff

WCD:LS

7
 7
 2
 4
 50
 19
 69
 428.25
 69
 359.25
 202
 506
 WCD

October 22, 1932.

Mr. R. D. Mailey
General Electric Vapor Lamp Co.
410 Eighth Street
Hoboken, New Jersey

Dear Mr. Mailey:

Some time ago President Compton wrote you concerning our need in the Physics Department for Graded Seals. According to your letter of October 11, we understand that you will be so good as to furnish us with the lot listed at \$202.00. We wish to express our appreciation for your cooperation with us in this respect, and are enclosing an order (No. 2560) covering the Seals listed.

In connection with two researches, we are interested in obtaining one $3/4$ " Seal and one $1/4$ " Seal as soon as possible. If it is not possible to complete the order at once, we would appreciate it very much if you would send us these two Seals at your earliest convenience.

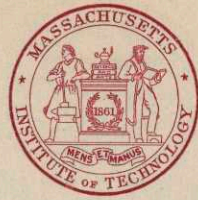
Very sincerely yours,

Wayne B. Nottingham
Asst. Prof. of Physics

WBN:W

Attn Mr. Nottingham —

Please return to
GRH



OFFICE OF THE PRESIDENT

October 15, 1932

Professor George R. Harrison
Department of Physics

Dear Harrison:

Nottingham recently brought me a proposal for securing graded seals whereby we would try to get from the Cooper Hewitt Company some graded seal glass and would employ a glassblower from Lynn to make up the seals. I wrote Mr. Mailey about this, but he replied that their patent agreements with A. A. Noyes and others made the procedure impracticable, but offered to give us such a low price that we could consider this as an effective cooperation by them in helping us. Accordingly I sent him a list of our requirements as obtained for me by Nottingham, and have just received the accompanying quotation.

I think it is really true that they have made us an excellent price, judging from bills for graded seals which I have paid previously.

If you wish to place the order, I would suggest that you accompany it by a letter referring to this correspondence with me and send the order directly to Mr. Mailey.

With kind regards

Very cordially yours,

Karl T. Compton
President

KTC.E

\$ 2560

GENERAL  ELECTRIC
VAPOR LAMP COMPANY

Formerly Cooper Hewitt Electric Company

GENERAL OFFICE HOBOKEN, N. J.

R. D. MAILEY
VICE PRESIDENT

410 Eighth Street
HOBOKEN, N. J.

October 11, 1932

Dr. Karl T. Compton, President
Mass. Inst. of Technology
Cambridge, Mass.

Dear Dr. Compton:

I have gone over with Mr. Evans the list of graded joints outlined in your letter of October 5th and am authorized by him to quote you for this whole lot a net price of \$202.00.

This list comprises

- 7 joints quartz to pyrex 1" I.D.
- 7 joints quartz to pyrex 3/4" I.D.
- 2 joints quartz to pyrex 1/2" I.D.
- 4 joints quartz to pyrex 1/4" I.D.

Because this price may appear high I would say that the ordinary customer would pay \$506.00 for this same list. You will therefore see that we are cooperating with you in your problem, and hope that it will be of real assistance to you.

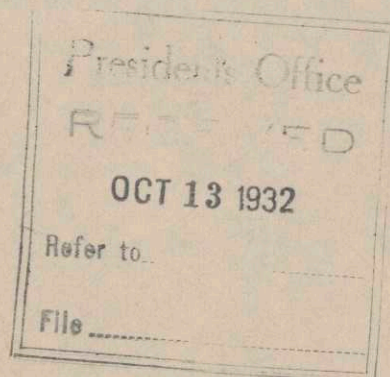
With kindest regards,

Very truly yours,

R.D. Mailey
med.

R. D. Mailey

RDM:MED



GENERAL  ELECTRIC
VAPOR LAMP COMPANY

Formerly Cooper Hewitt Electric Company

GENERAL OFFICE HOBOKEN, N. J.

410 Eighth Street
HOBOKEN, N. J.

October 25, 1932.

Prof. Wayne B. Nottingham,
Department of Physics,
Massachusetts Institute of Technology
Cambridge, Mass.

Dear Prof. Nottingham:

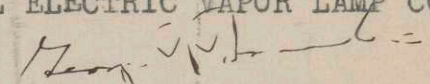
Many thanks for yours of the 22nd
inst., and for your order 2560, received with it.

This order has been put right in
work, and we will make shipment of the entire
lot of graded joints very promptly.

We hope that you will consider
the special lot price quoted you as confidential,
and it is far below what we could ordinarily quote
on material of this type.

Very truly yours,

GENERAL ELECTRIC VAPOR LAMP CO.


George R. Brewster
Ass't. Sales Manager.

GRB:F