

PAGES

MISSING



.. THE CENTRAL ..
Railway and
Engineering
Club ..
OF CANADA

OFFICIAL PROCEEDINGS

Vol. 2.
No. 7.

TORONTO, CAN., October 20, 1908.

\$1.00 per year
15c. per copy

OFFICERS, 1908.

President:

W. R. McRAE,
Master Mechanic, T.R.Co.

Vice-President:

ACTON BURROWS,
Managing Director, *Railway
and Marine World*, Toronto.

Second Vice-President:

C. A. JEFFERIS,
Master Mech., Con. Gas Co., Toronto.

Executive Committee:

J. J. FLETCHER,
Supt. Boiler Dept., Canada
Foundry Co., Toronto.

J. C. GARDEN,
Gen'l Foreman, G.T.R. Shops, Toronto.

R. PATTERSON,
Master Mechanic, G.T.R., Stratford.

J. BANNAN,

Chief Engineer, City Hall, Toronto.

H. G. FLETCHER,
Rep. Garlock Packing Co., Toronto.

A. DIXON,
Gen'l Foreman, C.P.R., Toronto Jct.

GEO. BLACK,
Road Foreman, G.T.R., Stratford.

Secretary-Treasurer:

C. L. WORTH,
Chief Clerk, M.M. Office, G.T.R.

Auditors:

F. G. TUSHINGRAM,
Chief Engineer, T.R.Co., Toronto

GEO. BALDWIN,
Yardmaster, Can. Foundry Co., Toronto.

R. N. CARD,
Car Distributor, G.T.R., Toronto.

Reception Committee:

H. G. FLETCHER
D. C. HALLOWELL

G. BALDWIN
J. W. McLINTOCK

J. BANNAN
A. J. LEWKOWIEZ

Published every month, except June, July and August by the
Central Railway and Engineering Club of Canada.

C. L. WORTH, Sec.-Treas., Room 409 Union Station, Toronto.

PROCEEDINGS OF THE CENTRAL RAILWAY AND
ENGINEERING CLUB OF CANADA MEETING.

ROSSIN HOUSE, TORONTO, October 20th, 1908.

Mr. Geo. Baldwin occupied the chair.

Chairman,—

Owing to the unavoidable absence of our President, our Secretary has asked me to take his place. Mr. Jefferis and Mr. Acton Burrows are also absent this evening.

We will start the order of business with the reading of minutes of previous meeting. As you all have received a copy of these minutes, I think it will be in order to have somebody move that same be taken as read.

Moved by Mr. Black, and seconded by Mr. MacNicol, that minutes of previous meeting be taken as read.

Chairman,—

The second order of business is remarks of President. I will not take up any more of your time with my remarks. Mr. Tory is here and ready to give us his paper.

There is one thing that the Secretary has asked me to mention; that is, everybody is asked to fill out his card so that we may know who is present.

Next order of business is announcement of new members.

NEW MEMBERS.

A. E. Wilson, District Manager Canadian Railway Accident Insurance Co., Toronto.

J. M. Downey, Patternmaker, Toronto.

J. Pratt, Storeman, Grand Trunk Railway, Mimico.

S. Woods, Steamfitter, Bennet & Wright, Toronto.

J. Irwin, Engineer Grand Trunk Railway, London.

H. C. Austen, Representative Dunlop Tire & Rubber Goods Co., Toronto.

H. G. Stanton, General Manager R. S. Williams Piano Co., Toronto.

W. Poulter, Machinist Grand Trunk Railway, Toronto.

Chairman,—

While that appears to be a very nice number of new members for one meeting, yet I think we should get busy to try and double that by next meeting. We expect to have some very good evenings this winter, and I think we ought to get around among our friends and see if we cannot induce them to join our Club.

MEMBERS.

G. Bernard.	O. A. Cole.	H. E. Rowell.
J. Pratt.	J. W. Griffin.	A. G. McLellan.
J. F. Campbell.	D. R. McRae.	H. G. Fletcher.
J. R. Armer.	R. H. Dee.	G. Black.
P. H. McCabe.	W. J. Bird.	W. N. Borthwick.
J. McWater.	R. Pearson.	E. Blackstone.
W. H. Wensley.	C. Shook.	J. M. Clements.
J. H. Stortz.	T. J. Ward.	E. Logan.
Jas. Herriot.	J. Walker.	G. Shand.
H. Cross.	W. McLean.	G. D. Bly.
J. Mouldey.	A. G. Piper.	P. H. Spry.
J. Barker.	D. F. Gow.	A. M. Wickens.
G. Baldwin.	J. M. Downer.	N. MacNicol.
J. Bannon.	P. J. Lynch.	J. C. Armer.
J. W. McLintock.	C. L. Worth.	H. Brown.
J. Kyle.	L. S. Hyde.	J. Dodds.
F. Burrows.	F. Smith.	

Chairman,—

Next order of business is report of standing committees.
None.

Unfinished business. None.

Discussion of paper read at previous meeting.

Do any of the gentlemen present wish to open up a discussion on the last paper read? If not we will proceed to call upon the next order of business, which is the reading of papers and reports and discussion thereof.

Under this heading I have much pleasure in introducing to you Mr. Alfred Tory, General Storekeeper, Grand Trunk Railway headquarters, London. As I told Mr. Tory outside, we have all the storekeepers, past and present, here to-night. I know we will be pleased indeed with the paper Mr. Tory will give us as we are all interested in storekeeping.

I have much pleasure in introducing Mr. Tory.

ORDERING AND HANDLING OF STORES.

BY MR. A. TORY, STORE KEEPER, GRAND TRUNK RAILWAY,
LONDON.

Gentlemen:—I must thank you for the kind words you have said in introducing me to the audience, Mr. Chairman. Some months ago when I was asked by your energetic, and I suppose might say, worthy Secretary, to prepare a paper for discussion at your meeting, I declined the honor, and asked him to try and get somebody more capable of preparing a paper. He would not take no for an answer and I finally consented, although reluctantly. The paper I am going to give you is in a condensed form, and are practical ideas gleaned from my experience as a storekeeper. I do not know whether you will find very much subject matter in this paper for discussion or not. However, while the subject matter may not give you very much for discussion, I hope it may interest you.

I have confined myself principally to the care of Railway "Stores," but it would also apply to large industries where it is found necessary to treat the "Supply" Department, as a separate one.

The Purchasing Department of all large Railway Systems (involving, as it does, the expenditure of many thousands of dollars each month, which means millions per annum), is a very important factor, and one which requires skilful handling in manipulation of the Purchasing and Distribution of "Supplies." To carry sufficient stock to meet the demands of the various departments, and at the same time avoid overloading, is no small undertaking for any Purchasing Agent, and will keep him continually at the daily grind—as the custom now is to buy from month to month, taking advantage of the market quotations, and buying direct wherever possible from manufacturers, instead of as formerly, contracting for yearly supplies through Agents and Middlemen, and which was found undesirable owing to the fact that contracts had to be made in advance on estimates prepared for the incoming year, and which frequently resulted in an over supply of various commodities, and an under supply of others, and when the fact is taken into consideration that the interest on \$1,000,000 at 4 per cent. amounts to \$40,000, it goes to show that it means tying up so much capital, in buying supplies so far in advance of actual requirements, and that it is to the interest of the Railways to confine all purchases, as much as possible, without impairing the efficiency of maintenance and renewals, and so the monthly system of buying was established and found to be the preferable of the two.

To carry out this method of handling supplies—the Pur-

chasing Agent has to depend largely upon the Divisional Storekeepers, at the various Store Houses, where supplies are kept for distribution, who in turn have to look to the Departmental Storemen and whose duty it is to prepare requisitions to see that these are made up on a monthly basis of "Supply and Demand."

The "Supplies" Car, which is used on a large number of Systems of Railways, is a splendid method of distributing supplies to Agents, and relieves the passenger and freight departments of the carrying of a lot of small freight, besides doing away with any possibility of supplies being lost in transit, and a much quicker delivery is guaranteed.

With regard to the handling and distribution of supplies by Departmental Storemen, I have classified the subject under two heads.

First: "Ordering of Supplies."

The matter of ordinary monthly supplies is one that should have the careful attention and consideration of the Storeman in charge, and requisition blanks should have columns for "Stock on hand" as well as "Stock required."

In preparing requisitions due consideration should be given to "Stock on Hand," and same shown in proper columns. They should be written in clear, legible hand, or better still type-written, if convenient to do so. Items should be classified as much as possible, and all necessary details given, especially where dimensions are required, even when prints or sketches are furnished, it is well to have the particulars also on requisitions, all of which will save delay, and very often unnecessary correspondence.

A good plan for Division Storekeepers to adopt is to take off each month on loose sheets, an extract of items outstanding on requisitions, showing number of requisition, and date ordered. They will then have in those extracts a complete list of material ordered but not supplied, which can easily be referred to when preparing requisitions, and will save duplication of orders or "Repeaters." As the back orders come along the items can be marked off on memo. sheets as well as requisition books, and as sheets become complicated may be filed or destroyed.

All requisitions should be carefully checked up, and gone over by Foreman before finally submitted for approval, and all items questioned that are special, or which appear to be excessive in quantity. Repeating orders for material already requisitioned for, but not supplied, should be strictly guarded against. There is a tendency, too often I think, to leave this to the discretion of the Storeman, and requisitions signed without proper scrutiny.

Second: "Handling and Care of Supplies."

In the first place it is very essential, and important that .

there should be "uniformity," and "system" in the method of handling, and caring for supplies:—"A place for everything, and everything in its proper place" is a splendid maxim, for Storekeepers to bear in mind, and follow as far as practicable. In order to carry this out to the best advantage it is necessary to have commodious, and convenient Store houses with plenty of cupboard, and shelf space—easy of access for distribution; bins properly labelled for bolts and nuts, and fittings of all kinds, are a great help in keeping track of such material, and more easily looked after, besides being more orderly.

A separate store house should be provided for oils, and like commodities when underground tanks are not in use. Oils should never be left in barrels exposed to the weather. Gasoline and benzine should be stored in air tight vessels to prevent evaporation.

Stock books should be kept at all "sub-stores," showing quantities on hand at the first of each month, and quantities received, and issued during the month, and if carefully kept up, will be a ready reference at all times for the Foreman or Superintendent, who is desirous of keeping in touch with his store room as well as being valuable assistance to the Store keeper in preparing his requisitions each month. A "receiving book" should be kept of all stores received, showing car numbers, date and class of material, which should be carefully checked with invoices in order that any differences may be detected, and a record taken of same for subsequent adjustment. Supplies as they come in should also be checked off requisitions, and dates, invoices are certified, etc., entered against items in the "receiving book."

The Stock at all times should be watched to prevent accumulating a surplus of material, which might become obsolete later on.

Whenever there is found to be an excess of any materials at one Store house, the Foreman or Superintendent of the Department should be notified at once, so that he may arrange to have it distributed for use at other points where required, instead of placing orders on General Stores for further supplies.

Due attention should also be given to the return of empty barrels, packages, etc., from time to time, to the General Stores, so that they can be used over again when issuing supplies.

The issue of supplies should only be made on a proper shop order, or requisition if outside, except in cases of emergency when such issues should be covered by requisition as soon as possible, so that charge can be made, and the necessary credit taken for all issues.

In the handling, and care of scrap, it is necessary that bins should be provided to admit of proper sorting, and keeping

separate the various grades, and classifications, and a statement of quantities on hand reported monthly through the proper channel, so that it may be disposed of when sufficient has accumulated to warrant sale.

In conclusion. It might not be amiss to say a few words regarding the waste of materials caused by lack of interest of employees in looking after same. On all large Systems of Railways there is bound to be a certain percentage of waste, and loss of material, part of which I maintain is attributable to carelessness or indifference in handling same.

In Railway Departmental Shops, and large factories, there is usually a tool room with a man in charge whose duty is to issue, and keep a record of tools handed to workmen, and see that they are returned, but the issuing of supplies generally is made upon requisition, and the very large quantities that are called for monthly goes to show that there is considerable waste going on, which in a year represents a considerable sum of money. It seems almost impossible to get workmen to recognize the fact that the same care, and economy should be exercised in handling, and using the supplies of their employers, that they would do were the said supplies their own personal property. The result is a much greater consumption than what is actually necessary.

How to stop this waste of material is a problem, which has not, so far, been satisfactorily solved, and all that can be done apparently, is to be on the alert for leakages, limit the supply, and investigate cases whenever there appears to be excessive consumption.

That, gentlemen, is my paper on the Ordering and Handling of Stores. I have, however, a few notes which might be of interest to you. They are taken from a paper that was read at the Storekeepers' Convention some two or three years ago in Chicago. The heading of the paper was, "Duties and Jurisdiction of a Railway Storekeeper." I have condensed the different headings. There are so many of them that I think when I get through with what I have here, you will come to the conclusion that a railway store keeper should be a walking encyclopedia.

The gentleman starts off by stating the duties of a Railroad Storekeeper are numerous and his responsibility great and that he should devote his whole time, thought and energy to the question of Materials and Supplies, in fact must be his hobby to the exclusion of all others. Then the gentleman defines the numerous duties in detail, which I give you in a condensed form, as follows:

"A Railroad Storekeeper should be an integrate part, a cog in the wheel, of the System by which he is employed."

"He must possess 'tenacity' and a faculty for concentration, etc."

"It is his duty to familiarize himself with all classes of material, and have a general knowledge of all classes of railroad material and be familiar with its composition and construction."

"It is his duty to supervise those under him to produce the best results."

"He must make himself thoroughly familiar with his base of supplies, etc."

"He must study the requirements of the territory depending upon his storekeeping for supplies."

"He must study the best interests of the company, using his best endeavors to prevent excessive and wasteful use of materials."

"He should keep in touch with the commercial world, to enable him to determine when and how to replace requisitions, so that the material may be furnished with as little delay as possible."

"He must inform himself by personal observation, with work under way or contemplated, and ascertain what material is likely to be wanted."

"It is his duty to keep in touch with his stock by personal observation, instilling into his subordinates the necessity of having ample supplies on hand at all times, to prevent delays. He must dispose of all obsolete material. Keep his stock standard to power and equipment and avoid carrying dead stock."

"He must systemize his Store house in such a manner that material may be handled promptly and economically."

"It is his duty to instill into his subordinates the necessity of cleanliness—Store houses, Lumber Yards, Scrap Bins—all should be models of neatness, etc."

"It is his duty to prevent the Store house being made a loitering place by employees."

"He must see that Store Department material is unloaded promptly from cars to prevent loss of revenue by such cars being out of service."

"It is his duty to help all Departments, at any and all times, in all possible ways, and do his best to promote the general welfare of the service."

"It is his duty to maintain the strictest discipline with Store employees, especially in regard to pilfering, etc."

"He must be ready at all times to listen to suggestions, which would improve the efficiency of the Store house."

"It is his duty to economically order material. He must keep accurate record of all such, ordered and received, check and inspect same, and protect his employers from cheap and inferior goods, etc."

"He must understand the nature of material, and store it so that it does not deteriorate."

"He must assume full control of all scrap and surplus material that may accumulate, etc."

"He must keep a book record of all material issued, etc."

"He should meet all officers and employees with that due respect, that designates the true gentleman, and treat all employees with the same courtesy as if he was conducting a commercial business."

"He should inspect all sub-store houses, at outlying points under his jurisdiction, etc."

"He should be subject to order of the General Storekeeper only, and report direct to him in matters pertaining to stock, etc., etc."

At the conclusion of the paper, the Chairman having announced it open for discussion—one member suggested that there were one or two more qualifications that General Storekeepers should have, viz.: "A pair of wings" and a "Halo."

Now gentlemen, you will see that a railroad Storekeeper has not a bed of roses by any means. If to be a successful storekeeper, it is necessary to have all the qualifications mentioned, I am afraid there are very few of us who will be able to come up to them. When I read it, it put me in mind of that portion of the Litany of the Anglican Church, where after each paragraph the response is "Good Lord deliver us," and I heartily say "Amen."

Chairman,—

We have listened very intently and with pleasure to the paper that has just been read by our friend, Mr. Tory, and I feel safe in saying, that there is no other storekeeper on the Grand Trunk Railway, or any other railway, who could have handled the subject better than Mr. Tory.

Mr. Tory stated in part of his paper that it was the duty of the storekeeper to go around and visit the several store houses occasionally. I suppose for the sole purpose of giving the storemen a setting out once in a while. I happened to be a storeman at Toronto some years ago, and I must say that Mr. Tory never gave me a setting out.

There is no doubt that there are a number of gentlemen present who will make some remarks or have some questions to ask. I will ask Mr. Pratt, Storeman at Mimico, to open the discussion.

Mr. Pratt,—

Mr. Chairman and gentlemen,—This is my first evening here and I think you should not look for very much from me. I was deeply interested in Mr. Tory's paper, and I know it will help me out considerably. I have only been a storekeeper about three years and am always open to learn. There is some very useful information in Mr. Tory's paper which will be of service to us all.

Chairman,—

I have much pleasure in calling upon Mr. Brown.

Mr. Brown,—

This is quite a surprise for me. I did not expect to be called upon to give my views with regard to handling stores. What we have heard Mr. Tory read from his paper on this line, I am sure will cover a good many difficulties which, from time to time, come before a storeman.

I can safely say from my experience in storekeeping that if these points are strictly carried out, the storeman will not go far astray. No matter how long a person has been at the business, one can always learn something.

Mr. Shook,—

This is something new. I did not come here expecting to be called upon to address an audience. I came here to listen to what Mr. Tory had to say, and the same as Mr. Pratt, to be benefited by what I could hear. I have only been about three years as day storekeeper, and was about three years night storekeeper. As night storekeeper I did not have anything to do with the ordering of stores. I think in the ordering of stores, as Mr. Tory has said, it is quite essential for the storekeeper to know what he wants. I find that in the store house where I am, it is really a hard matter to be supplied at all times to meet the demands in some lines. In ordering we sometimes order a little light as we do not wish to have an over stock.

The suggestions in Mr. Tory's paper are very good, and I think I have heard something that will be a benefit to me.

Chairman,—

The last speaker said he did not come here prepared to address the gentlemen present. We want every member of this Club to get on his feet once in a while to say something, and we do not want to forget the fact that Mr. Tory wants to get on to some of your wrinkles. He wants to learn something as well as you and to get on to the way you handle your stores, and perhaps by listening to you here to-night, he may learn something which he would not learn by coming to your stores a dozen times.

Mr. J. Herriot,—

I have listened with a great deal of pleasure to my old friend, Mr. Tory. I had the pleasure to work with Mr. Tory, or alongside him for a number of years, and I know the hints he has given us to night will be quite useful to storekeepers.

While I was on the Grand Trunk in the stores department, I found that the stores book helped us quite a lot. Mr. Tory stated a storekeeper should not over-stock and neither under-stock. It is a pretty hard thing to strike a happy medium in this regard. In my time on the railroad,—and I suppose it is still in vogue—we placed our orders in on the 25th of the month for supplies for the next month. Consequently that made it necessary to carry from four to six weeks' stock. We found that part of the stores would be supplied direct from the general stores at London, that is if London was the divisional point, and if they did not have it in stock, they would place the balance of the order on some merchant and we would get our supplies the month following. I had a little system of my own by which I would strike an average of the amount of each article used, and would take this as a basis for ordering. Even that I found difficult as the shop was not always ready to help the storekeeper out. For instance, we used, on an average, 1,000 feet of pipe a month, and on the 25th of the month we would order our usual 1,000 feet. An order would come in at the beginning of the next month, from the Superintendent, or the man in charge for all your pipe or a large part of it, for some special job, and this would eat you out of house and home in pipe. Perhaps the next day we would have some engines in which would require piping and they would want to know why we could not supply them with the pipe.

As you know, a special order is not allowed to be put through by the storekeeper, and if you do put one through, you must give a good reason for it.

Mr. Tory says a storekeeper's life is not a bed of roses. It certainly is not, as you are supposed to meet all demands.

I am out of the railroad line now. In railroading you are doing one kind of work and carrying one kind of stores right along, but in commercial life you are, perhaps, building locomotives, steam shovels, bridges, etc., and you do not know from one month to another, what your requirements are. Of course you know, in a way, what you will need regarding tools, sundries, etc.

Mr. Tory stated that all stores should be equipped with bins and tags. We have a system in the firm I am working with of having a card, in a little tin case, on each bin, which is filled out by the storeman, and this card will show you, at any time, the amount of stores you have in that bin. This is a handy reference, as you can go to the bins at any time and you there have a record of what you have in them.

Of course on the Grand Trunk you have a book system, and I believe there used to be about a dozen articles on a page. With most of the commercial firms they use a card system for keeping record of their stores. I prefer the book system myself but the card system has advantages also.

Mr. Stortz,—

Probably the most important point in regard to handling supplies and stores, from the employer's point of view, would be to curtail the waste, and this has not been mentioned tonight. It has always struck me that if you could make the employees understand how much the supplies cost in comparison with the wages earned, it would be the best way to get at the saving in waste of stores. It is a subject which has interested employers a good deal and everybody has their own little schemes about it. I do not know that I can suggest any general idea or practice which could be put into service to save this waste. The supplies come to the employees like water and they use them as such, and they never stop to consider what this costs a large corporation. I think if the employees could come to understand the importance of this, from a financial basis, they would probably be more careful. The waste of supplies in a large corporation means a great leakage.

Chairman,—

In fairness to Mr. Tory, I might mention that the last paragraph of his paper refers to the subject of waste of stores.

Mr. MacNicol,—

I have had considerable experience in connection with stores, and there is a good deal in what Mr. Tory has said, also in what some of the others have said. I came here tonight expecting to find some of the storemen going after this question in earnest.

There are a great many leakages in connection with the stores which I often feel could be stopped. One reason why it is not stopped, is that the different departments have no interest in the stores, because they know nothing about what is going on, for some reason or other—perhaps due to our system being incomplete in this particular. There may be a system, which I do not know about, in charging up the stores between the divisions. Our engines and crews at home certainly get an enormous amount of supplies, and I am sure there is considerable waste, but we have no thorough way of checking it up. It is hard to stop the leakage, unless you follow up each individual closely. There is no system of checking, apparently, of materials going out, and it amounts to considerable in a month.

There is no method in force now that I know of, in any of our department stores where they know what the actual supply will be for any other department, and there seems to be a disregard in connection with how the stores should be handled.

There seems to be an enormous waste, and, I think it is up to the officers in charge to check it up. We may be able to do a little with the men afterwards. There seems to be no system of checking the waste up. Some person suggests putting the stores under one head and following up the leakages all through in that way. It is hard to say, just what would happen in that case.

Another point which I notice, but I will not say it is up to Mr. Tory; the supplies come in so irregular that it is impossible for a small stores to know when they can expect them each month. Consequently the small stores have to stock heavily. Some months supplies will come in on the 25th, and then they will probably be two months without stores. I think our stores should be handled on time so that it will not be necessary for the small storekeeper to carry a greater stock than necessary.

I maintain that at each stores, in fact all stores, the supply men should carry a stock and the men should get their supplies at home. I feel satisfied that a great many stores departments on different systems are carrying stock which the supply men should carry.

I do not know of any other subject which should be of greater interest to the different officers of a railway. A great deal can be done in reducing these expenses without hurting anybody.

Regarding oil, I think all tanks should be made of iron and put under ground and no oil should be carried which cannot be stored in iron tanks. I think that is the most economical system for keeping oil which I have seen anywhere.

Chairman,—

We have with us to-night, Mr. R. W. Grace, General Superintendent of the Canada Foundry. He has had a large and a varied experience in matters relating to stores. He has been with some of the largest firms in the States, and perhaps he may be able to draw some comparisons between the handling of stores in the States and Canada. We have a very large stores at the Canada Foundry, and I have no doubt Mr. Grace will be able to draw some comparisons.

Mr. R. W. Grace,—

Storekeeping is certainly an interesting business, although you are disinterested. I recently had a good deal of reason to believe that, although I am not familiar with railroad storekeeping, yet storekeeping is very much alike. I have been very much impressed with the remarks made to-night. I think the Grand Trunk Railway should get these gentlemen

together and get their ideas. It would be a means of clearing up some of the faulty points now apparently existing.

As regards railroad storekeeping, I would like to know where you get your supplies from, whether from a central stores. I think the main thing is, to encourage the individual in the care of the supplies for the interest of the company. It is not what Mr. Tory can do himself, but what he can get his assistant storekeepers to do for him. I think it would help considerably to make public a statement of the supplies used by each division. At the organization where I am, we keep records of each article used, and at the end of every two weeks it is brought to the notice of the foreman of the department, and shows whether he is making an increase or reduction. This record was formerly kept on the pay tickets, which were filed away and no benefit derived from them. Now each article is entered up on a sheet and at the end of each pay period (two weeks), account, say, No. 540, shows an increase or decrease in a certain department. The foremen all see what they have spent and will try to do better the next time.

With the railroad, if there was some way of displaying, say, by graphic chart, or by some other means bringing these facts to the attention of those interested, I think it would do good. In mentioning this I want to rather dwell on the point, that it is the individual in the rank and file that makes the company. The leading man is less important, the foreman is still less important and the superintendent is the least important in the matter of economy in stores.

In speaking about stores, I always think of a story which was told me about a purchasing agent. This man was in the habit of cutting things in two. One day he cut an order in two for two connecting rods and you can imagine the trouble he got into. My duties lie considerably in cutting things in two; occasionally I get wrapped over the fingers by some of the gentlemen present.

I do not know enough about storekeeping on a railroad to form an opinion of whether it is best to supply all the stores from a central station. I do not know how long it would take to deliver, say, five couplers to any point on the railroad, but it does not seem to me it would take long. I would like to ask Mr. Tory how that works out.

As regards my own particular experience, I have built store-rooms and had, in a measure, to do with them for some time, but I think the germ of the whole thing is, the care of the individual, whether he throws a pail down on its sink and dinges it or sets it on its end, thus taking care of it. I think the whole remedy lies in co-operation. If you could publish monthly records of what is done on each division, I think that is the best way to work it out.

Mr. Tory,—

As regards Mr. MacNicol's remarks about apparent lack of

interest by other departments. I have not touched on the system as it comes under the head of accounting. Each month the heads of the different repair departments get a statement of the expenditure from one department to another, and then again they get a detailed statement of the stores that have been supplied by the general stores department.

As regards requisitions, these are made each month by the foremen and then sent to his divisional officer for approval. They are then submitted to his superior officer for final approval, and then sent to the purchasing agent. On my division, which takes in Western Ontario, the requisitions are sent to the purchasing agent at Montreal. You will see that it is necessary for the divisional storeman to keep on hand four to six weeks' material in order to give the purchasing agent time to issue orders, receive quotations and issue final orders for his material. A great deal of the material does not pass through the general storekeeper but it is shipped direct to the place intended therefore, when the requisitions come to the purchasing agent they are supposed to be cut and gone over by the foreman, superintendent of division and finally the superintendent of motive power or transportation, before reaching him.

Mr. Grace,—

I was wondering whether you take advantage of a central storage for different materials and repair parts.

Mr. Tory,—

We carry what we consider is standard stock. As regards locomotive parts, we do not carry these, as we make the majority of them. The locomotive department looks after the ordering and supplying of such parts. The orders do not go through the stores, but through the master mechanic of the Montreal shops. The stores only deal with supplies to be purchased outside and do not handle anything which any department can make themselves. The department itself accepts a requisition from the department ordering the goods and supplies and charges it direct to their stock. The stores only deal with supplies in general.

There used to be a system, and I believe it is still in force, where a comparative statement was made each month of the consumption of oil and fuel in pounds and gallons per mile. Each foreman could have a record of what he used and these records were received through the master mechanic each month. It showed whether the engineman was using more stores and oil than he should do. That system, I know, was extensively carried out under the old system, but I do not know whether it is now in force or not.

Mr. Grace,—

I think the men should know it. You want to encourage the men to take an interest in the amount of supplies they use and place a premium on it in order to encourage emulation.

Mr. Tory,—

The storemen, often, when they do not get their supplies (and there may be good grounds for it, owing to commercial reasons, perhaps) on the next month's requisition they re-order them again and it goes through and they get a double supply when they come.

Then, again, a foreman wants a repair part for a machine and he thinks he had better order two so that he will have a spare one on hand. He never uses it and it becomes obsolete material. I referred to this in the last part of my paper, stating that a great deal of waste was caused by lack of interest on the part of the employees, and their indifference in handling supplies. It is almost impossible to get them to use care and economy in handling supplies as though they were their own personal property. Until you can get the workmen of a railroad or a large establishment to understand that the material they are supplied with is as valuable as though they supplied it themselves, you will always have waste. Recently our people have arranged a system of charging the brakemen for new lamps and it has done good. Now there are a lot of fuses ordered but I feel sure never used. I have never seen more than a dozen fuses used when I have been travelling.

Mr. Pratt,—

Regarding Mr. Tory's remarks about storemen duplicating requisitions at times, there are times when it is necessary for a storeman to do this. I am only young at the business, and I do not want to criticize too hard. What I want to say is, that it is disgraceful the waste that goes on. The only way to get at it is through the men. I have had 13 years experience as engineer and 4 or 5 years as fireman, and while I was an engineer I would never allow my fireman to waste anything, as I was not allowed to do when a fireman. I really think the only way to overcome the enormous waste going on, is to appoint a man at the station to put the stores on the engines, and take off the surplus of cans, shovels, etc.

Mr. Herriot,—

May I be allowed to say a few words regarding matter of repeating orders? When I took charge of Stratford shop stores I found a little kink which the storekeeper ahead of me had started. By this kink it was practically impossible to

repeat a requisition. He used a common foolscap book and ruled it off into columns. It showed every article used at that station. We put them down in classifications according to the Grand Trunk System. It was ruled off for each month, (January, February, March) and for instance, bolts $\frac{3}{4}$ inch x 1 inch were put down as 25 on hand and the average consumption 200, and would make his requisition out accordingly. Immediately he received these goods he would check up his book. The next month he would go around and check up the stores again putting down the quantity on hand, if the previous months order was not scored off as received, and the requisition was not repeated. I never had a repeat while I was there, at least I was never called down for it.

Mr. H. Spry,—

Mr. Chairman and gentlemen, I am not a member of this Club. I was sorry I did not get here in the forepart of the evening to hear the whole paper as I only heard the last few clauses in the discussion of it. I have enjoyed the evening very much, however, and have received a few pointers.

Mr. Walsh,—

I do not know that I can say anything regarding store-keeping. That is something out of my line of business. I think the paper was very interesting and I have learned some facts which I was not aware of before.

I notice in your system of storekeeping you are a little different to ours. Our supplies are got by contract. Specifications are gotten out for supplies for the year and tenders are made on them. I do not think it is a good system and think the purchasing agent would be the most economical and efficient. We are not tied down altogether to getting our supplies from contractors. There are times when we may want special goods which are not on the specification list, and in these cases we can use our own judgment and get what we want. If a contractor does not furnish satisfactory goods, we can throw them back at him and order elsewhere.

Chairman,—

Mr. H. G. Fletcher can generally say something about any subject under discussion.

Mr. H. G. Fletcher,—

I thank you very much for calling upon me. My business is really not as a storekeeper but my main object is to stock the storekeeper. There is no question about it but that there has been so much discussed to-night that I cannot con-

concentrate what I would really like to say. I do not feel that I can put it together clearly.

There is a good deal of confusion existing between the stores and the purchasing agent. As Mr. Tory has said, and possibly he has something to do with that part of the work, of cutting an order in two. This makes a great deal of confusion not only for the store-keeper, but for the agent who has to supply the goods.

Mr. Bly,—

Storekeeping is a little out of my line of business, unfortunately, but I quite agree with the suggestions that have been made here to-night. The greatest waste and difficulty is with the individual man. I find it is one of the hardest things to get men who have the handling of materials, such as fuel, packing and oil, to be economical with them. They throw the packing away and you find sheets of rubber cut to disadvantage and packing rings taken out and thrown away which are just as good as when they were put in. I have a couple of pumps. They had trouble with the packings before I took charge. They used armfuls of packing to keep the water end tight. Since I took charge I packed them and they have never leaked since, which is over a year ago. I find the same waste exists with oil. The man, who looks after the engine, starts the oil going when it is a little cool in the morning, and finally, when it is running a stream, he does not pay any attention to it.

I think, if we could get the men to take an interest in their supplies, they would save more than their salaries in many instances. If we could get some way, to either give the men a percentage of the amount of supplies they save, to a certain extent that would help to eliminate considerable loss through waste.

Mr. MacNicol,—

I would like to know how Mr. Bly goes about reducing waste.

Mr. Bly,—

I started right with it and did not allow anything to be thrown away until it was necessary to do so.

Mr. MacNicol,—

Was there any of the material which was thrown away fit for use?

Mr. Bly,—

Yes, it was taken out because they either packed the pumps too tight or too loose. They really did not investigate to find out what was the trouble but took the packing out and tried some other. It was really the fault of the workmen.

Chairman,—

Is there any other gentleman who would like to prolong the discussion. If not, we will proceed with the next order of business.

Mr. Grace,—

I would like to propose a vote of thanks to Mr. Tory for his very interesting paper.

Chairman,—

You have heard the motion by Mr. Grace and seconded by Mr. Walsh, that a hearty vote of thanks be tendered to Mr. Tory for his fine paper. Carried.

Mr. Tory, it gives me a great deal of pleasure to convey to you the hearty vote of thanks and for your attendance this evening and giving us such a good paper.

Mr. Tory,—

I thank you for the hearty vote of thanks which you have tendered me. It is fully appreciated. I am only sorry that I was not able to place before you a much better paper on the handling of supplies, not on railroads alone, but in all establishments. What I have said are facts from my experience during the past thirty years in different departments on the railroad. I am sorry my paper was not more lengthy. There is a great deal to be brought out in connection with the handling of supplies and stores, and there is a great deal to learn. Those getting supplies know how they should be handled, and as some gentlemen said to-night, the company should get these men together and get their ideas. There is a great deal to learn by getting these men together, and personally, I am always pleased to receive suggestions and ideas.

I wish to thank you again for the vote of thanks.

Chairman,—

I would have somebody move that we adjourn.

Moved by Mr. Fletcher, and seconded by Mr. Black, that meeting adjourn.