

**THE SHIPPING SITUATION  
BETWEEN NEW YORK CITY  
AND PHILADELPHIA**

**A SURVEY OF THE FACTORS CAUSING THE GROWTH OF  
MOTOR TRUCK TRANSPORTATION, FOR THE PURPOSE  
OF PRESENTING SPECIFICATIONS TO BE MET IN CO-  
ORDINATING RAIL AND MOTOR TRUCK TRANSPORTA-  
TION FOR INTERCITY SERVICE**

**BY  
RUSSELL W. TALBOT**

**NEW HAVEN  
PRINTED FOR  
THE COMMITTEE ON TRANSPORTATION  
1931**

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## INTRODUCTORY NOTE

**T**HE problems of coördination of railroad and motor truck operations loom so large before the eyes of shippers and transportation men to-day that the Committee on Transportation of Yale University felt it could make a distinct contribution at this time by publishing an essay on those problems written by one of the Strathcona Memorial Fellows in Transportation at the University this past year. The merit of this essay that led to its choice for publication lies in the clarity of presentation resulting from the use of case history studies, and in the genuine understanding of the problem from the point of view of the shipper as well as from that of the railroad or motor truck official.

W. M. DANIELS

S. W. DUDLEY

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## PREFACE

**D**URING the last ten years the railroads of this country have been losing certain classes of their freight traffic to motor truck transportation. This loss has been especially severe in the movement of merchandise freight between industrial centers. This has been all the more keenly felt because of the present business depression, and those responsible for the maintenance of freight revenues on the rail carriers are more interested than ever in means for regaining the lost traffic and preventing still further losses. Thus it seemed appropriate at this time to survey a typical shipping situation with a view to analyzing the causes for the loss of railroad traffic and determining possible remedies.

The importance of such an investigation was pointed out to the writer by Mr. J. R. Downes, Chief of Freight Transportation of the Pennsylvania Railroad, to whom the author is deeply indebted.

An expression of appreciation is due to those industrial traffic managers who so generously provided data on which this study is based and to the managements of the Electric Railways Freight Company, the Cincinnati and Lake Erie Railroad, and the Chicago, North Shore, and Milwaukee Railroad for their kind coöperation in making it possible for the writer to study the operation of their respective coördinated rail-truck services.

Finally, the author wishes to express his gratitude to Professor Kent T. Healy, of the Graduate School of Yale University, for his many helpful suggestions and kindly assistance in preparing this paper for publication.

RUSSELL W. TALBOT

June 14, 1931.  
New Haven, Connecticut.

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**PART I**



## CHAPTER I. INTRODUCTION

### HISTORICAL BACKGROUND

**T**HE American railroads for many years previous to the last decade performed substantially all of the inland transportation service in this country except in urban areas, because all other means of transportation then existing were unable to compete with the railroads in either services or rates. It is now common knowledge that this monopoly of transportation by the railroads no longer exists in either the passenger or freight transportation fields.

In the field of freight transportation the railroads have suffered the heaviest in the loss of less-than-carload shipments of merchandise freight, moving between industrial centers less than 250<sup>1</sup> miles apart. That this loss is at present growing and extending to carload shipments of many classes of freight is quite generally recognized.

This heavy loss of freight traffic by the railroads has resulted from the development of a new means of transportation, the motor truck. The extension of motor truck transportation to intercity service has been made possible by the development of the motor truck to its present state of adaptability and by the recent extensive improvement of the highway system of the country. The success which motor trucking companies have attained in acquiring the freight traffic moving between industrial centers is *prima facie* evidence that this new shipping agency is providing more satisfactory transportation in this field than is being provided by the railroads.

It is generally accepted that motor transportation, because of certain inherent characteristics, is primarily adapted to distribution of freight in the terminal areas. It is evident to students of transportation that motor trucks can perform the service in these areas less expensively and more advantageously than the railroads can ever hope

<sup>1</sup> 250 miles is taken as the upper limit because of two factors: (1) railroad class rates are in proportion considerably higher for the first 250 miles than for longer distance hauls, thus making price competition easier up to this point; (2) 250 miles is about the extreme limit at which motor transportation can provide first morning delivery.

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to do by the use of rail facilities alone. It is also accepted that railroads are primarily adapted to providing mass transportation in train loads between terminal areas and can do so considerably cheaper than motor trucks. It follows from these facts, that the coördination of rail and truck transportation for such intercity service has become the line of attack by which the railroads are attempting to regain the long haul portion of this business.

However, it is evident that such coördination of transportation agencies will only succeed when a coördinated system is found which will provide more satisfactory transportation between cities than is at present being rendered. When an economical system is worked out that will provide material benefits to both the shippers and the public at large, the railroads will be able to accomplish their objective.

It was with the hope of providing first-hand data which could be used as a basis for developing such a coördinated system of transportation for intercity service that this survey of the shipping situation between New York City and Philadelphia was undertaken.

### METHOD OF INVESTIGATION

At the outset it was felt that before any suitable system of coördinated rail and motor truck transportation could be worked out, which would be applicable to the transportation of freight between industrial centers, it would be necessary to establish the basic requirements for such a system. The data upon which to base specifications should be obtained at first hand in order to present a true picture of the actual situation.

This coördinated system would be obliged to compete in an open market with other methods of transportation and, to be successful, must meet the requirements of the purchasers of transportation better than other agencies. The data upon which to base these specifications should, therefore, be obtained from the purchasers, and it seemed best to obtain them by interviewing traffic managers.

In order to place such an investigation within the range of the present study, it was necessary to limit the field survey to the situation existing between some two industrial centers rather than to try to make a general survey of the country as a whole. Reasonable de-

## INTRODUCTION

ductions could then be drawn for similar situations elsewhere. It was therefore decided to make a survey of the freight traffic between New York City and Philadelphia. This region was selected for the following reasons:

1. The number of concerns shipping between these two points is relatively large; consequently a suitable background exists for obtaining adequate data.
2. Motor truck transportation is well established in this region and the volume of freight carried by truck between the two cities involved is large.
3. These two cities are about 100 miles apart, at which distance motor trucking can very effectively compete with rail transportation.

In order to make as broad a survey as possible in the time available, an endeavor was made to obtain data from representative concerns in each of the various industries which shipped by motor truck between the two points.

A detailed outline was prepared as a means of facilitating the interviews with the various traffic managers and of insuring that complete data would be obtained from each. This outline was essentially similar to the CASE HISTORY OUTLINE presented as Appendix I.

## PRESENTATION OF THE DATA

It was felt that the most logical and comprehensive manner in which to present the data obtained in this survey would be in case form. By using the data obtained in each interview as the subject matter for a case, each of the cases presents a picture of the shipping situation in the particular industry represented by the shipper from whom the data were obtained.

The cases themselves are put in Appendix II so as not to detract from the sequence of the main body of the paper. A comprehensive picture of the shipping situation in the area surveyed may be obtained by consulting this Appendix, since these cases represent a most valuable part of the results of the investigation.

It is essential to have in mind certain general facts regarding the business of any concern in order to be able to appreciate its transportation problems. Such of these facts as were deemed necessary are

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presented in topics *A*, *B*, and *C* of each case history. It is also evident that the transportation arrangements of each concern and certain pertinent facts relating to them should be outlined in order to provide a suitable background for the analysis of the data which apply specifically to the investigation. Such is the purpose of topics *D* and *E*.

It should be recalled at this point that the primary purpose of the field survey was to determine the essential present-day requirements of shippers in intercity transportation service. The rapid growth in motor truck shipping between such industrial areas furnished a clue as to how these requirements could be determined. It is evident that the factors responsible for this growth furnish an accurate gauge as to the demands of shippers in intercity transportation. Hence, in each interview, considerable effort was made to ascertain just why that particular concern was shipping by motor truck between New York City and Philadelphia. The factors involved in this consideration are submitted, together with any supporting information which could be obtained, in topic *F* of each case history.

Finally, it was considered advisable to obtain from each concern certain data on motor trucking and also comparative cost data as between rail and motor truck shipping for its various products. These data, which will be useful in working out the details of the coordinated systems of transportation which are to be proposed, are presented under topic *G*.

## CHAPTER II. ANALYSIS OF THE DATA

### ANALYSIS OF THE REASONS WHY EACH CONCERN SHIPS BY MOTOR TRUCK

**T**HE reasons why each concern ships by motor truck between New York City and Philadelphia are tabulated, under topic *F* of each case, substantially as obtained from the various traffic managers. Accordingly, it is only natural that many of these reasons are generalities, often colored by personal viewpoints, with the result that in some instances inaccurate personal conclusions have been drawn. It was found necessary, therefore, for the purpose of this analysis, to break down each reason into one or more basic factors rather than to accept it at its face value. After following this procedure, the conclusion was reached that there are ten distinctly separate factors controlling the situation. An explanatory list of these factors follows:

1. Overnight delivery.—This involves movement between the shipper's plant and the consignee's store door, between the plant closing time and the store-door opening time the next morning.

2. Shipping cost.—This includes the cost of shipping by motor truck from plant to store door, or by rail together with any local cartage at either end of the rail haul.

3. Store-door delivery by one through transportation agency.—This involves the movement of freight from plant to store door in a single container, car, or truck; or by any other method not involving transfer en route.

4. Loss and damage.—This covers any loss of or damage to goods in transit caused by the rough handling of or damage to transportation equipment or by rehandling at freight transfer stations.

5. Direct contact with the transportation agency.—This refers to close, friendly relations between the shipper and the carrier serving as a basis for working out the shipper's problems.

6. Non-scheduled rush service.—This refers to service that can be provided for rush shipments at any time, regardless of schedules.

7. Packing requirements.—This covers any formal packing requirements which may be imposed by the different agencies of transportation.

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8. Store-door reconsignment without transfer.—This involves the ability to reconsign a shipment arriving at a store door without transfer from one vehicle to another.

9. Settlement of claims.—This involves the promptness and sureness of claim settlements.

10. Factors pertinent to the particular business involved.—This covers special factors which are of concern only to a particular business.

It should be pointed out here that the movement of freight by boat between New York City and Philadelphia does not play a rôle of any importance in the type of traffic under consideration, because of the long water route via the Atlantic Ocean and the Delaware River. Consequently, in analyzing the data, it is only necessary to consider motor trucking and the railroads as the competing systems of transportation.

In reviewing the whole situation as represented by these fifteen cases, the conclusion was reached that some of the factors involved were essential, others desirable, and still others merely incidental. Therefore, the following system of designating the relative importance of each factor was adopted:

Essential factors, represented by symbol "A."

Desirable factors, represented by symbol "B."

Incidental factors, represented by symbol "C."

The analysis of the reasons why each concern ships by motor truck and a summary of the basic factors involved are presented in Chart I on the following page.

### CONCLUSIONS AS TO THE DEMANDS OF SHIPPERS IN INTERCITY TRANSPORTATION SERVICE

The following conclusions as to what shippers are demanding of intercity transportation service are based on the summary of the controlling factors involved in this situation, as given by Chart I.

The next few pages are devoted to a consideration of the importance of each one of these factors in the total situation, the physical characteristics of each transportation agency which are involved in

**CHART I**  
**AN ANALYSIS OF THE REASONS WHY EACH CONCERN INVESTIGATED**  
**SHIPS BY MOTOR TRUCK**

Case No.	Nature of industry	1 <i>Overnight delivery</i>	2 <i>Shipping cost</i>	3 <i>Store-door delivery</i>	4 <i>Loss and damage</i>	5 <i>Direct contact</i>	6 <i>Rush service</i>	7 <i>Formal packing requirements</i>	8 <i>Reassignment without transfer</i>	9 <i>Settlement of claims</i>	10 <i>Factors pertinent to the business</i>
1	Paper	A		B	C		B		B		
2	Paper products	B	A	C							
3	Paper products	A		B							
4	Textile	A		B							
5	Textile	A		B			B				
6	Bulk chemical	B	A	C			C				B
7	Chemical	A	B	B							
8	Heavy hardware	A	B	C	B						
9	Heavy hardware	A		B			B	B			
10	Floor covering products	A	C	C	B	B	B				
11	Radio sets and loud speakers	A		B	B		B			C	
12	Confectionery	A			A	B				C	
13	Cracker and cake products	A		B	B						C
14	Paint	A		B							
15	Cigar	A		B							
<i>Summary:</i>											
	No. of A's	13	2	0	1	0	0	0	0	0	0
	No. of B's	2	2	10	4	2	5	1	1	0	1
	No. of C's	0	1	4	1	0	1	0	0	2	1

A=essential factors. B=desirable factors. C=incidental factors.

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making each factor a consideration, and the economic consequences which accrue to industry as the result of the operation of each factor.

1. *Overnight delivery.*—That overnight delivery is of paramount importance is evident from the fact that in thirteen of the fifteen cases it was pointed out to be the main reason, or one of the main reasons, for shipping by motor truck instead of by rail; and, in the other two cases, it was considered to be an important advantage of motor trucking. Shipping via rail and local truck delivery between New York City and Philadelphia may require from two to three days.<sup>1</sup> Shipment by motor truck provides overnight service, in most instances from plant closing time to store-door opening time the next morning.<sup>2</sup> The very appreciable difference in shipping time accounts in part for the importance of this factor.

Motor trucks are able to provide overnight delivery, while the rail carrier cannot, because of the greater operating flexibility of trucks in terminal areas. The practice of the larger trucking companies is to operate their trucks over the road during the night when other traffic is comparatively light. Truckload shipments move direct from plant to consignee's store door. Less-than-truckload shipments move to the freight transfer station which the larger trucking companies maintain, where each shipment is transshipped to a smaller local delivery truck serving the particular territory to which that special shipment is bound.<sup>3</sup> Less-than-carload shipments moving via rail require local motor truck delivery to the freight station at the originating end, and to the consignee from the railhead at the receiving end. This procedure is time-consuming. Another delaying factor is that most railroad freight stations have definite opening and closing hours, and the local cartage service must conform thereto. Carload shipments moving via rail, especially in New York City, generally require involved switching moves, which often consume much time, to reach the consignee's plant. In addition, direct delivery requires that the consignee have a rail connection. Such basic characteristics as these explain the difference in the shipping time which these two means of transportation require for movement between the cities involved.

<sup>1</sup> See Cases Nos. 4 and 6, topic *F-2*.

<sup>2</sup> Refer to all cases, topic *F*.

<sup>3</sup> See various cases, topic *G-3*.



## ANALYSIS OF THE DATA

The more outstanding economic consequences that make the factor of overnight delivery so important are listed below:

a. It allows jobbers and dealers (the consignees) to carry reduced inventories and stocks.<sup>4</sup>

b. It eliminates the necessity for large storage facilities or for warehousing, thus allowing the consignee to order in small lots instead of in carload lots as formerly.<sup>5</sup>

c. It allows production to be scheduled to fill orders rather than to maintain complete stocks, which makes for direct savings to the manufacturer who is also generally the shipper.<sup>6</sup>

2. *Shipping cost.*—That shipping cost is of prime importance to a few concerns and of some consequence to others is well illustrated by the summary of this factor in Chart I. One concern for whom shipping cost was the main reason for shipping by motor truck instead of by rail stated that they deliberately selected the trucker who offered the lowest rate without placing any great emphasis on other requirements.<sup>7</sup> The other shippers who considered shipping cost an important factor did not go to this extreme, but selected the trucker who offered an average rate and could best fulfill their other requirements.<sup>8</sup>

The ten other concerns who did not consider shipping cost a factor in their choice of truck transportation apparently did not do so for various reasons: some, because trucking costs were definitely higher than the cost of shipping via rail; others, because they did not pay the shipping charges themselves; and still others, evidently, because they did not have a real grasp of the actual comparative costs. A more detailed analysis of the shipping cost factor is presented later,<sup>9</sup> in order to determine just what part it plays in this situation.

3. *Store-door delivery by one through transportation agency.*—The movement of freight from plant to store door in a single container, car, or truck, or by any other method not involving transfer

<sup>4</sup> Refer to all cases, topic *F*.

<sup>5</sup> See Cases Nos. 3, 8, 10, and 11, topic *F*.

<sup>6</sup> See Cases Nos. 4, 9, 12, and 13, topic *F*.

<sup>7</sup> See Case No. 6, topic *G-3*.

<sup>8</sup> See Cases Nos. 2, 7, 8, and 10, topic *G-3*.

<sup>9</sup> See Chart II on pages 28 and 29.

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en route, is not an essential factor, but a desirable or incidental one to most shippers, as is shown by the summary in Chart I.

Shipments by motor truck, when the entire truckload is for a single consignee, move directly from plant to store door without transfer en route. Truckload shipments from one concern to several consignees, or less-than-truckload shipments, move directly in a road truck<sup>10</sup> from the shipper's plant to the freight transfer station of the trucking company in the destination city. The shipments to the various consignees are then distributed from the freight station in smaller local delivery trucks operated by the trucking company.<sup>11</sup> A carload shipment by rail to a consignee with a direct rail connection to the originating line, of course, moves direct to store door without transfer en route. Carload or less-than-carload shipments to consignees without rail sidings<sup>12</sup> must be delivered to the store door from the railhead by motor trucks which are not operated by the rail carrier. With such shipments the shippers in general do not pay or arrange for the local cartage service, leaving that to the consignees.<sup>13</sup> In most cases the consignee maintains standing arrangements with a local trucker for this service and need only notify this trucker by telephone whenever the arrival notice of a shipment is received. If the local trucker has a large number of trucks, he may call at the particular freight station each day and pick up any shipment for his regular consignee customers without the necessity of being notified. On the other hand, if the consignee rarely requires the use of such local delivery service, he may find it best to make individual arrangements for each shipment.

This difference in the terminal area delivery service rendered by these two means of transportation, as far as this factor is concerned, is thus merely one of convenience, eliminating the following actions on the part of the consignee:

<sup>10</sup> A road truck in actual practice is either a truck with a large body or a trailer. The State laws of New Jersey prohibit the hauling of more than one trailer over State highways. Hence, the usual practice in times of heavy business is the movement of truck and single trailer units over the road.

<sup>11</sup> See Cases Nos. 2, 3, and 4, topic *G-3*.

<sup>12</sup> See Case No. 13, topic *F-1*.

<sup>13</sup> See Cases Nos. 1, 3, 5, 7, 9, 10, 11, 14, and 15, topic *E-3*.

## ANALYSIS OF THE DATA

- a. Making arrangements with some local trucker for cartage service.
- b. Having a clerk follow up arrival notices and see that the cartage service is being properly rendered.
- c. Accounting in connection with the local trucking bills.<sup>14</sup>

4. *Loss and damage.*—The summary in Chart I shows that loss and damage is an essential factor to a few shippers and a desirable or incidental one to others in their choice of motor truck transportation over rail. Those concerns to whom this factor is of consequence have products which can easily be damaged in transit and which are mainly shipped in less-than-carload lots.<sup>15</sup>

Less-than-carload shipments moving by rail must be transferred from local delivery trucks at the receiving end of the rail haul, and to local trucks at the delivery end for cartage to the consignee. Carload shipments bound for consignees who have no siding facilities must be transshipped to trucks for delivery. These movements by rail involve two rehandlings and one rehandling, respectively, compared to one rehandling for a through haul in a single container. It is this rehandling process which is the cause of much of the loss and damage to goods in transit. As outlined above under factor 3, shipments moving by motor truck to freight transfer stations for local delivery require only one handling.

Some of the shippers claim that truckers use more care than the railroads in rehandling freight. The direct contact which the shippers have with the truck drivers allows personal instruction concerning proper care of fragile freight.<sup>16</sup> Judging by the data obtained, loss and damage to freight in transit caused by the rough handling of, or damage to, transportation equipment is very slight in this intercity service.

The more important economic consequences which result from loss and damage are:

- a. The loss of the jobber's or consumer's good will because goods are received in imperfect condition.<sup>17</sup>

<sup>14</sup> See Cases Nos. 11 and 15, topic *F*.

<sup>15</sup> See Case No. 8, topics *F* and *G-3*, and Cases Nos. 10, 12, and 13, topic *F*.

<sup>16</sup> See Case No. 12, topic *F*.

<sup>17</sup> See Case No. 12, topic *F-2*.

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b. The inconvenience and delay caused by the necessity of rushing shipments to take the place of those lost or badly damaged in transit, with the consequent irritation of the consignee.

5. *Direct contact with the transportation agency.*—The summary in Chart I shows that the factor of direct contact with the transportation agency is of consequence to relatively few shippers. These are for the most part small concerns with special shipping problems difficult to solve.

This survey indicates that the railroads, on the whole, cooperate to the fullest extent with the larger shippers but often are inclined not to make special efforts to solve the problems of the smaller ones. It should be pointed out, however, that it is a physical impossibility for any railroad to grant all of the special services which the various shippers request without obstructing the operation of the railroad and increasing operating expenses beyond reason. Some of the smaller shippers are of the opinion that the railroads slight them in favor of the larger ones.<sup>18</sup> The trucking companies, on the other hand, being much smaller organizations, maintain a direct friendly contact with each shipper. The traffic manager does business directly with the owner or district manager of the trucking company and is thus able to obtain full cooperation in solving shipping problems.<sup>19</sup> The trucker is obliged to do this to maintain the good will of the traffic manager and to retain business, because of the strong competition among the trucking companies operating in this intercity service.

The factor of direct contact influences the shipper in his choice of transportation only when he has some particularly difficult shipping problem to solve.<sup>20</sup> In both of the industries encountered during this survey where direct contact was of importance, the problem which had to be solved was in connection with the elimination of damage in transit to certain of their products.

6. *Non-scheduled rush service.*—The summary in Chart I indicates that the ability to obtain non-scheduled rush service whenever needed is important to certain shippers. This factor is of consequence

<sup>18</sup> See Case No. 12, topic F-3.

<sup>19</sup> See Case No. 10, topic F-5, and Case No. 12, topic F-3.

<sup>20</sup> See Case No. 10, topic F-5, and Case No. 12, topic F-3.

## ANALYSIS OF THE DATA

to those industries whose business is of such a nature that occasional rush deliveries are required by their customers. Many of these industries manufacture partially or entirely to order and thus do not maintain a stock from which to make prompt deliveries. In such instances an expedited form of transportation service is valuable in reducing the total delivery time.<sup>21</sup>

Railroads, because of the very nature of their operation, are unable to provide expedited service for rush shipments, either in express service or in regular less-than-carload freight service. Many of the trucking companies, on the other hand, will provide the shippers with whom they are doing business such service at any time of the day. When this service is required, they operate a truck over the road on a special trip direct to the consignee's door. If the rush shipment is of truckload size, the shipper is generally charged the regular rate. If it is a less-than-truckload shipment, the shipper is required to pay on a truckload basis to enable the trucking company to make a reasonable profit on the special move.<sup>22</sup>

The factor of non-scheduled rush service has the following economic advantages:

- a. It makes possible very prompt delivery on rush orders, which is valuable in obtaining the customer's good will.
- b. It makes it possible for time lost in production delays on goods manufactured to order to be made up in part by delivery which is more rapid than the normal.

7. *Packing requirements.*—The factor of packing requirements influences a relatively small number of shippers in their selection of motor truck transportation. The industries to whom this factor is of importance have products of such a nature that the railroads find it necessary to impose formal packing requirements upon them in their tariffs in order to minimize damage in transit.<sup>23</sup>

The railroads, because of their size and the volume of their business, find it necessary to permit exceptions to this code of require-

<sup>21</sup> See Cases Nos. 1, 5, and 9, topic E-4.

<sup>22</sup> See Cases Nos. 1, 5, 9, and 11, topic F-4.

<sup>23</sup> See Cases Nos. 8 and 9, topic E-5.

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ments only in the case of certain commodities, stipulated in the tariffs, for which a higher rate is charged. The truckers, on the other hand, have no formal requirements and will accept anything for transit provided it is packed well enough to protect it from damage. Therefore, when any industry develops a special method of packing its products, the trucker will readily accept them, while the railroads will not do so until formal application has been made and the tariff changed.<sup>24</sup> These special methods of packing often enable the shipper to save both in labor and in the cost of packing materials and at the same time may provide equal or better protection than the packing required by the railroads.

8. *Store-door reconsignment without transfer.*—The ability of a consignee to reconsign a shipment arriving at his store door, without the necessity of transfer from one vehicle to another, is of consequence to only a limited number of shippers in their choice of motor truck transportation.

A jobber on receiving a shipment which is being delivered by motor truck from the manufacturer can give the driver of the truck further delivery instructions for the entire truckload or a portion thereof. The driver then distributes the goods to the jobber's customers for a slight additional charge without transfer to another truck.<sup>25</sup> This practice gives motor trucking an advantage over shipment via rail only when the rail shipment is by carload delivery to the consignee's siding and the local delivery haul is not performed by trucking service. Hence, this advantage as a factor in the situation is of only very limited consequence.

Some of the economic advantages which are involved in the ability of the consignee to reconsign without transfer are:

- a. It eliminates rehandling over the consignee's platform.
- b. It is a time-saving procedure, eliminating the necessity of arranging for other local cartage service.
- c. It saves transportation expense because the intercity trucker will handle reconsignments for an additional charge which is considerably less than the charge for shipping by regular local cartage service.

9. *Settlement of claims.*—The factor which involves the prompt-

<sup>24</sup> See Case No. 9, topic F-5.

<sup>25</sup> See Case No. 1, topic F-3.

## ANALYSIS OF THE DATA

ness and sureness of claim settlements for loss or damage to goods in transit is of incidental consequence to a few shippers in their choice of truck transportation.

The trucking companies, because of their direct contact with the shippers, settle all claims for loss and damage as soon as presented.<sup>26</sup> The railroads, because of the size of their organizations and the formal procedure which they require to substantiate claims, consume an appreciable time before claims are settled. However, the great majority of shippers are completely satisfied with the prompt treatment which the railroads now give to this matter.<sup>27</sup>

None of the shippers interviewed entertained any doubts as to their ability to collect reasonable claims from either the railroads or the trucking companies with whom they were doing business. The railroads pay all such claims as a matter of good business policy, and the trucking companies all carry insurance against loss or damage to goods in transit. Practically all shippers now require the trucking companies to furnish statements of the amount of insurance which they carry or investigate the matter on their own account before giving them any business.<sup>28</sup> Therefore, this factor can be considered to have no consequence in the total situation.

<sup>10.</sup> *Factors pertinent to the particular business involved.*—A glance at the summary in Chart I shows that there are characteristics peculiar to certain industries which have influenced a few shippers in their choice of truck transportation.

The use of motor trucks for making C.O.D. deliveries to small consumers who have no credit relations with the manufacturer is an interesting example of such a consideration in favor of truck shipping.<sup>29</sup> The railroads, because of the nature of their operation, cannot undertake to perform such service for the shipper. Another example is the use of motor trucks for shipping carload lots to consignees without rail sidings, thus eliminating the necessity of transshipping to trucks for local delivery from the railhead.<sup>30</sup>

<sup>26</sup> See Cases Nos. 9 and 11, topic *F*.

<sup>27</sup> See Case No. 1, topic *F-5*, and Case No. 12, topic *F-2*.

<sup>28</sup> Refer to all cases, topic *G-35*.

<sup>29</sup> See Case No. 6, topic *F-5*.

<sup>30</sup> See Case No. 13, topic *F-1*.

**CHART II**  
**ANALYSIS OF COMPARATIVE SHIPPING COSTS**  
 All rates quoted are in cents per cwt.

Case No.	Names of products	Does shipper pay trucking charges?	Importance of the factor "shipping cost"	Mainly CL or LCL shipments in area	LCL rail rates	CL rail rates	N. Y. City local cartage rate	Philadelphia local cartage rate	Trucking rate	Total cost of shipping via rail	On CL or LCL basis	Savings by motor truck shipments
1	Paper	Pay CL rate only	—	LCL	22.5	18.5	13.0	9.0 <sup>81</sup>	27.0	44.5	LCL	17.5
2	Cardboards	Yes	A	LCL	28.5	18.5	40.0	27.0 <sup>81</sup>	40.0	95.5	LCL	55.5
	Photo-mounts		A	LCL	41.5	—	40.0	27.0 <sup>81</sup>	40.0	109.0		68.5
3	Paper box flats	FOB only	—	LCL	28.5	19.5	10.0	6.0	50.0	44.5	LCL	loss 5.5
4	Woolen cloth	Yes	—	LCL	41.5	—	25.0	17.0 <sup>81</sup>	70.0	83.5	LCL	13.5
5	Velvet	Yes	—	CL	?	41.5	25.0	17.0 <sup>81</sup>	100.0	66.5 <sup>82</sup>	CL	loss 33.5
6	Raw chemicals	Yes	A	LCL	Various	Various	Various	Various	Same as LCL rail	LCL + local cartage	LCL	Save local cartage
7	Raw chemicals	Yes	—	CL	34.0	22.5	17.0 <sup>81</sup>	11.5	Same as CL rail	27.5 <sup>82</sup>	CL	5.0
	Technical chemicals		B	LCL	41.5	28.5	17.0 <sup>81</sup>	11.5	Phila. cartage	70.0	LCL	30.0
8	Conductor pipe	Yes	B	LCL	34.0	23.0	20.0	13.0 <sup>81</sup>	45.0	67.0		22.0
	Steel windows		B	LCL	34.0	19.5	20.0	13.0 <sup>81</sup>	45.0	67.0	LCL	22.0
	Steel shelving		B	LCL	28.5	19.5	20.0	13.0 <sup>81</sup>	45.0	61.5		16.5



**CHART II (Continued)**  
**ANALYSIS OF COMPARATIVE SHIPPING COSTS**

All rates quoted are in cents per cwt.

Case No.	Names of products	Does shipper pay trucking charges?	Importance of the factor "shipping cost"	Mainly CL or LCL shipments in area	LCL rail rates	CL rail rates	N. Y. City local cartage rate	Philadelphia local cartage rate	Trucking rate	Total cost of shipping via rail	On CL or LCL basis	Saving by motor truck shipment
9	Steel filing cabinets	FOB only	—	LCL	34.0	—	30.0	20.0 <sup>81</sup>	125.0	84.0	LCL	loss 41.0
10	Linoleum	Yes	C	LCL	34.0	22.5	10.0	7.0 <sup>81</sup>	CL + N. Y. & Phila. cartage	51.0	LCL	11.5
11	Radio sets	FOB only	—	LCL	41.5	28.5	20.0	13.0 <sup>81</sup>	62.0	74.5	LCL	12.5
12	Hard candy	Yes	—	LCL	34.0	28.5	10.0	7.0 <sup>81</sup>	50.0	51.0	LCL	1.0
13	Crackers	FOB only	—	CL	—	22.5	—	—	CL + N. Y. & Phila. cartage	CL <sup>82</sup> + N. Y. cartage	CL	loss, am't of Phila. cartage
14	Paint	FOB	—	LCL	28.5	19.5	23.0 <sup>81</sup>	15.0	50.0	66.5	LCL	16.5
	Calcimine				22.5	19.5	23.0 <sup>81</sup>	15.0	50.0	60.5		10.5
15	Cigars	Yes	—	LCL	41.5	34.0	10.0	7.0 <sup>81</sup>	50.0	58.5	LCL	8.5
	Raw tobacco			CL	41.5	22.5	10.0	7.0 <sup>81</sup>	35.0	29.5 <sup>82</sup>	CL	loss 5.5

<sup>81</sup> Estimated on the basis of Philadelphia cartage being two thirds of New York City cartage.

<sup>82</sup> Consignee having no rail connection, local cartage charge at delivery end must be included.

<sup>83</sup> Philadelphia switching rate of five cents per cwt. included.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

Such factors pertinent to particular concerns might well be decisive ones for them in their choice of a transportation system. This fact is an argument in favor of having an industrial organization connected with the operation of any transportation system to work out means of satisfactorily serving the particular needs of shippers.

### ANALYSIS OF COMPARATIVE SHIPPING COSTS

In order to reach some definite conclusions as to the rôle which comparative shipping costs play in the total situation, a detailed analysis was made of this factor for each of the fifteen cases investigated. These analyses are presented by Chart II, on pages 28 and 29. The direct comparison in Chart II of the cost of shipping by motor truck with the total cost of shipping by rail is supplemented by various descriptive facts.

The trucking rates are given as they were obtained from the shippers, either in definite figures or in a comparison when the shipper did not care to divulge his exact trucking rate. These rates cover the through movement from shipper's plant to consignee's store door by one transportation agency.

In order to afford a true basis for comparison, the total cost of shipping via rail was compiled with reference to the particular conditions which existed in the business of the shipper concerned. This cost was figured either on a carload (CL) or less-than-carload (LCL) basis, according to the class of traffic which predominated for each shipper in the area under investigation. This distinction was not especially difficult to make, as most of the products moved in one class or the other.

If the movement was on a carload basis to the sidings of the consignees, the total shipping cost via rail was, of course, equal to the rail carload class rate plus any necessary local switching charges. Class rates are used because the traffic under consideration was largely merchandise and did not move under commodity rates. The total cost was equal to the carload class rate plus the cost of local cartage at the delivery end of the rail haul, if there were carload shipments to consignees without rail sidings. (The local cartage rate was figured on a truckload basis.) If the shipments were less-than-car-

## ANALYSIS OF THE DATA

load, the cost of local cartage on both ends of the rail haul was added to the less-than-carload rail rate. In many cases the shipper kept no figures of the cost of operating his own trucks, so the average cost of the local cartage from his plant to the freight station could not be determined. Practically all shippers maintain their own fleet of trucks for this work.<sup>84</sup> In these cases the local cartage rate in Philadelphia was assumed to be two thirds of the corresponding rate in New York City, this being the ratio indicated by such comparative figures as were obtained.<sup>85</sup>

Any miscellaneous cost items, such as those due to differences in packing requirements or in the cost of loading or unloading, were not taken into consideration because of insufficient data. In a large number of industries the miscellaneous costs are essentially the same for both means of transportation, so the analysis of the comparative shipping costs was simplified by excluding the miscellaneous costs.

A study of Chart II will show that all the industries which consider shipping cost to have an important influence on their choice of motor truck transportation have two features in common.<sup>86</sup> They all pay the trucking charges on shipments in this area and they all have a trucking rate which is appreciably lower than the cost of shipping via rail. Hence, their use of motor truck transportation instead of rail results in substantial savings to them, which would be reflected in a larger profit to the shipper or a lower price to the consumer, if the latter were necessary to meet competition.<sup>87</sup> It should be pointed out here that most companies cannot arbitrarily assume or not assume the cost of shipping their products to given sections of the country, but have to be governed largely by the prevailing practices of other companies in the industry.

Chart II indicates that those concerns who do not consider shipping cost to be a factor in their choice of truck transportation can be classified in two groups on the basis of comparative shipping costs.

One group is comprised of those for whom the cost of shipping by motor truck is definitely more than the corresponding cost of ship-

<sup>84</sup> Refer to all cases, topic *E-2*.

<sup>85</sup> See Case No. 3, topic *G-8*.

<sup>86</sup> See Cases Nos. 2, 6, 7, 8, and 10 in Chart II.

<sup>87</sup> See Cases Nos. 6 and 7, topic *F-1*.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

ping by rail.<sup>38</sup> In three of these cases the shippers do not pay the trucking charges but pass them on to the consignees.<sup>39</sup> The consignees are apparently willing to pay this extra cost of shipping by motor truck, because they consider the service factors valuable. In these cases the shipper would have no direct reason for rejecting motor trucking because of higher shipping cost, unless objections were made by the consignees. In the other cases of this group the shipper himself is apparently willing to pay the higher shipping cost because of similar compensating factors.<sup>40</sup>

The other group is comprised of those concerns to whom the cost of shipping by motor truck is less than the corresponding rail cost.<sup>41</sup> That the shippers in this group do not consider shipping cost a factor of any consequence in their choice of truck transportation is accounted for as follows:

1. The shippers do not pay the transportation charges and hence are not directly benefited by any saving.<sup>42</sup>
2. The saving in shipping cost is small in comparison with the value of the product, and therefore the saving is not considered of consequence.<sup>43</sup>
3. The shippers do not maintain accurate records of local cartage costs and consequently do not know whether they are actually saving money in shipping by truck.<sup>44</sup>

### SOME DISADVANTAGES OF MOTOR TRUCK TRANSPORTATION AT PRESENT

It will be remembered that the purpose of making this survey was to establish the requirements for a coordinated rail and motor truck transportation system which would render more satisfactory service than is given by any other system at present in the intercity haulage of freight. Therefore, it is desirable to describe some of the disad-

<sup>38</sup> See Cases Nos. 3, 5, 9, 13, and 15 in Chart II.

<sup>39</sup> See Cases Nos. 3, 9, and 13 in Chart II.

<sup>40</sup> See Cases Nos. 5 and 15 in Chart II.

<sup>41</sup> See Cases Nos. 1, 4, 7, 11, 12, 14, and 15 in Chart II.

<sup>42</sup> See Cases Nos. 1, 11, and 14 in Chart II.

<sup>43</sup> See Cases Nos. 4, 7, 12, and 15 in Chart II.

<sup>44</sup> See Cases Nos. 4 and 7 in Chart II.

## ANALYSIS OF THE DATA

vantages of present-day motor trucking, in order to present a well-rounded picture for use as a background.

The most serious drawbacks to motor truck transportation result from the fact that there are many small trucking companies rather than a few large ones operating in this field in very keen competition. It is more or less common knowledge among the shippers that this competition has led to unethical practices on the part of some of the truckers.

Some truckers are reputed to have a lucrative business in hauling liquor between Philadelphia and New York City, at the same time carrying partial loads of legitimate commodities as a blind. Such truckers offer very cheap rates to shippers in order to secure their business and make their profit on liquor. If a truck happens to be confiscated by the police, it results in the loss of legitimate goods by the shipper and undue notoriety. This has made most shippers very cautious as to the trucking companies with which they contract for transportation.

In some companies the shipping clerks have agreements with certain truckers to do everything possible to prevent other truckers from getting the business of their companies. When a shipper purchases from companies in which this practice has developed, he is forced to deal with one of the accepted truckers in order to obtain the requisite service.

In some cases shippers are obliged to carry their own transportation insurance to protect against the loss or damage to their products moving by motor truck. Where the products are of an expensive nature, the loss due to the destruction of an entire truckload is large and the insurance carried by the trucking company is often not adequate to cover the loss.<sup>45</sup> A few large trucking companies would be able to provide adequate insurance.

The above-mentioned drawbacks, together with the fact that the cost of shipping certain articles by motor truck is greater than by rail, are the main existing disadvantages of motor truck over rail transportation that were indicated by this survey.

<sup>45</sup> See Cases Nos. 4 and 5, F-3, and Cases Nos. 7 and 15, G-3a.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

### THE STATUS OF CONTAINER CAR SERVICE IN THIS AREA

Container car service was established by the Pennsylvania Railroad in 1928 from New York City and South Kearny, New Jersey, to Philadelphia. This system represents the first attempt by the railroads in the area under consideration to establish a coordinated rail and motor truck service for providing a new method of handling less-than-carload freight shipments. This was done with a view to putting back on the rails the long haul portion of this intercity freight movement which has been largely lost to the trucking companies, as is demonstrated by the fact that the intercity movement of freight analyzed in this study is almost entirely by motor truck transportation.<sup>46</sup>

A brief description of container car service is embodied in the following extract from a booklet issued by the Pennsylvania Railroad on this subject.<sup>47</sup>

The container service, as its name implies, is a form of transportation particularly adapted to the carriage of goods in less-than-carload quantities, whereby the articles to be transported are placed in steel containers which are securely fastened on flat cars or loaded into gondola cars and so moved from point of origin to destination. The containers are so constructed that they can be transported upon specially equipped railroad cars as well as upon motor trucks and trailers.

Container service has not achieved the success that its sponsors hoped for and at present is being used mainly for the transport of a few special commodities, such as magazines, cigars, cement, and sand, and of consolidated small lot shipments from freight forwarding companies. The following seem to be the more important reasons why this service has not been more widely adopted.

1. Container service does not provide overnight delivery and the flexible service features given by motor truck transportation in the intercity movement of freight.<sup>48</sup>

2. The limited size of containers prevents their use for products whose

<sup>46</sup> Refer to all cases, topic *D*.

<sup>47</sup> *Container Service—Pennsylvania Railroad*.

<sup>48</sup> See Cases Nos. 3, 4, 5, 7, 8, 11, 12, 13, and 14, topic *G-9*.

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dimensions are not adapted to the dimensions of the container. (Outside dimensions are 7 feet wide, 9 feet long, and 8 feet high.)<sup>49</sup>

3. Some concerns do not use containers because their shipments to any given consignee are not large enough to load the containers to advantage.<sup>50</sup>

4. Some shippers do not use container service because they find it more expensive than motor truck transportation. They are able to ship the amount of their product which they can load into one container for less by truck than the combined cost of the minimum charge per container, which is \$8.25, plus the cost of the local haulage of the container.<sup>51</sup>

<sup>49</sup> See Cases Nos. 1, 6, 8, 9, and 10, topic *G-9*.

<sup>50</sup> See the Pennsylvania Railroad Container Rate Schedule in Exhibit A of the Appendix and Cases Nos. 2 and 4, topic *G-9*.

<sup>51</sup> See Cases Nos. 6 and 7, topic *G-9*.

## CHAPTER III. SUMMARY

### REQUIREMENTS OF A COÖRDINATED RAIL AND MOTOR TRUCK TRANSPORTATION SYSTEM FOR INTERCITY SERVICE

**T**HE requirements of a coördinated rail and motor truck transportation system for intercity service may be stated by summarizing the analyses presented in Chapter II. Some of these requirements, as indicated by the analyses, must be regarded as absolutely essential and others as highly desirable, so a differentiation will be made in enumerating the requirements.

#### 1. ESSENTIAL FACTORS:

- a. *Overnight service from the shipper's plant to the consignee's store door.*

This through service must be performed between the hours of 6.00 P.M. and 7.00 A.M. the next morning, the time limits corresponding to the plant closing time and the store-door opening time, respectively.

- b. *A total cost to the shipper not above the prevailing trucking rate.*

The rates of the more substantial trucking companies are fairly uniform. A trucking association has been formed by the larger trucking companies in the area studied to protect the truckers from the destructive effects of a competitive rate war, by standardizing rates. At present it is felt that the association controls the rates of the more reliable truckers, and it is claimed that its influence and membership are growing.

The coördinated service rate schedule should provide both a "container load" and a less-than-"container load" schedule of rates, similar to the present practice of the railroads and trucking companies.

#### 2. DESIRABLE FACTORS:

- a. *Shipment from the plant to the consignee's store door on one through rate.*

The shipper should be billed at one rate for the entire movement and should deal with one transportation company only.



## SUMMARY

b. *Elimination of rehandling en route.*

Regardless of the size of container adopted by a coordinated service, there will always be the necessity of moving some less-than-"container load" shipments. These shipments will have to be consolidated at the receiving end into an economical container load and sorted out at the delivery end for local distribution. Thus, in actual practice, rehandling of shipments of small size can never be eliminated.

c. *The ability to provide non-scheduled expedited service for rush shipments.*

This involves operating small trucks over the road direct from plant to consignee's store door at any time required by the shippers. This operation must be superimposed on any coordinated rail-truck service.

d. *The establishment of a special organization for the purpose of integrating the rail and truck operation of the coordinated system.*

To be successful, a coordinated system must satisfactorily solve the shipping problems of industry and at the same time adhere to the requirements imposed by railroad operation.

e. *Coordinated service provided by the railroads in conjunction with the more substantial trucking companies.*

The local pick-up and delivery should be performed by these truckers and the long haul by rail.

These substantial trucking companies have well-established trade connections of which use should be made. Also, they are familiar with the special delivery requirements of certain industries.

## **PART II**

## CHAPTER I. THE COÖRDINATION OF RAIL AND MOTOR TRUCK TRANSPORTATION

### BASIC PRINCIPLES INVOLVED

**T**HE basis of any coördinated system of rail and motor truck transportation must be some form of container or vehicle which can be transported equally well by rail or by motor, and which can readily be transferred from one agency to the other. Consequently, the problem resolves into the design or adaptation of some container or vehicle which can be used to provide the requisite service to shippers outlined in Chapter III of Part I.

Certain coördinated rail-truck services are now in operation on some of the interurban electric railways in the Middle West. The most feasible solution to the problem seemed to lie in the adaptation to steam railroad practice of some such principles as were in successful operation on these interurbans. Therefore, the operation of the coördinated services on these railways was studied both by actual observation and by analysis of descriptive material. The conclusion was reached that it was possible to adapt to steam railroad practice the essential features of two of these services; namely, the Railwagon Service of the Lake Shore Electric Railway and the Truck-body Container Service of the Cincinnati and Lake Erie Railroad. Outlines of this proposed adaptation of each of these two services are presented in Chapters II and III of Part II, respectively.

The Railwagon Service hauls semitrailers on flat cars, and the Truck-body Container Service hauls truck bodies. However, the operating practices of these two services are essentially the same. The container unit, whether semitrailer or truck body, is hauled on special flat cars between rail terminals in the two cities being served. The truckers perform the terminal pick-up and delivery of these container units. Shipments of "container load" size move without rehandling en route directly from consignor to consignee, the container being sealed before leaving the shipper's plant. Less-than-"container load" shipments are consolidated and distributed in the usual manner by freight forwarding companies, making use of either

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

railwagon or truck-body service. The rail haul is performed during the night so as to provide early morning store-door delivery.

### WAYS IN WHICH COÖRDINATED RAIL AND MOTOR TRUCK TRANSPORTATION MAY PROVIDE REQUISITE SERVICE TO SHIPPERS

This consideration of the ways in which coördinated rail and motor truck transportation may provide requisite service to shippers is based on the requirements established in Part I of this paper.

*Overnight service.*—Overnight service, with early morning delivery, from the shipper's plant to the consignee's store door is being given by the coördinated rail-truck services now in operation on the interurban railways in the Middle West, many of which operate between cities more than one hundred miles apart. (Cleveland to Toledo on the Lake Shore Electric; and Cincinnati to Toledo on the Cincinnati and Lake Erie.) Such systems are able to provide this service because of the flexibility of terminal operation with motor trucks, the rapid interchange of the container unit between the motor and rail carrier, and the high schedule speed of the rail carrier in the long haul between the terminal areas. It is felt that the adaptation of such systems to steam railroad practice can furnish service between cities located two hundred and fifty miles apart or less during the time limits set by the requirements—6.00 P.M. to 7.00 A.M. In this extreme case the terminal movements by motor truck in each city would have to be performed in about two hours each, leaving nine hours for the two hundred and fifty mile rail haul, which can be provided by fast freight service. A proportionately greater amount of time would be available for rail and truck movements in operation between cities nearer together.

*Comparative shipping costs.*—It has been demonstrated by these rail-truck systems that such coördinated service can be profitably rendered to the shipper at lower rates than equivalent service by motor trucks or less-than-carload rail shipment. It is on this competitive cost basis that the rail-truck systems are successful.

The Railwagon Service on the Lake Shore Electric Railway between Cleveland and Toledo provides a rate for 8,000 pounds of any

## COÖRDINATED RAIL AND TRUCK TRANSPORTATION

merchandise, that is equal to Rule 26 of the rail class-rate schedule applying between these two points. For 20,000 pounds, which is the capacity loading of a single container unit, the rate is equal to the rail fifth-class rate. The actual tariff follows:

### THE LAKE SHORE ELECTRIC RAILWAY COMPANY LOCAL FREIGHT TARIFF<sup>1</sup>

NAMING  
RATES AND RULES GOVERNING TRANSPORTATION OF MERCHANDISE  
IN  
BONNER RAILWAGONS  
BETWEEN  
CLEVELAND AND TOLEDO, OHIO

*Rules and Regulations governing application of rates named herein.*

- Item 1 Such freight must be contained in Bonner Railwagons, the inside dimensions of which shall be 16 ft. 9 in. long, 7 ft. 7 in. wide, and 7 ft. 4½ in. high and of such design and type as to conform to special railway flat cars in use to carry same and also conform to special type of loading ramp; said railwagons to be duly licensed for loading, unloading and operation by the Bonner Railwagon System, Inc. The maximum loading capacity of these units is 20,000 lbs. in weight and 936 cu. ft. in volume.
- Item 2 Carrier will accept for transportation only such railwagons as comply with specifications contained in Item 1, and doors of each such railwagon must be securely sealed by shipper with ordinary car seals, either shipper's own private seals or those supplied by carrier.
- Item 3 All freight handled under this tariff will be accepted and signed for as "SHIPPER'S LOAD AND COUNT."
- Item 4 Only *one* pick-up and *one* delivery will be given under this tariff.

*Rates, per railwagon, from one consignor to one consignee.*

\$24.40 per railwagon, containing 8,000 pounds or less. (See Item 1.)  
Extra charge for excess over 8,000 pounds will be 13 cents per cwt.  
(See Item 1.)

Issued January 29, 1931

Effective March 3, 1931

<sup>1</sup> This is a copy of a portion of the complete tariff sheet numbered as follows:  
G.F.D. No. 109                      Ohio No. 103.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

Most commodities moving by rail in less-than-carload lots are in a higher class than either Rule 26 or fifth class. In addition, the cost of local cartage at both ends of the rail haul should be included in comparing shipping costs. Motor trucking rates on the whole are generally as high as the corresponding less-than-carload class rates.<sup>2</sup> Therefore, it is reasonable to assume that these coördinated systems will be able to offer cheaper rates to shippers for corresponding services than either motor truck or less-than-carload rail transportation.

A recent investigation made by the Pennsylvania Railroad between Philadelphia and New York City indicates that such coördinated service adapted to steam railroad operation will furnish lower through rates to shippers than the existing forms of transportation.<sup>3</sup>

*One through rate.*—The shipment from plant to store door on one through rate is a practice which fits in well with coördinated rail-truck service. The rail carrier may establish the rate schedule for this through service and do business directly with the shippers, in which case the carrier must provide for the terminal trucking in one of two ways. It may enter the trucking business and operate its own fleet of trucks in each of the cities being served or it may contract with local trucking companies to perform such service for it. The latter is the practice on the Lake Shore Electric Railway. The other alternative is for a trucking company to establish the through rate schedule and deal with the shippers. In this case the rail carrier bills the trucking company for hauling the containers between the two cities being served, under a tariff filed to cover such operation. This is the practice on the service routed via the Cincinnati and Lake Erie Railroad.

*Elimination of rehandling en route.*—The elimination of rehandling en route is a natural consequence of coördinated rail-truck service for shipments of "container load" size. Less-than-"container load" shipments must be handled in the usual manner by consolidation at the receiving end and by distribution at the delivery end. Rehandling in connection with such shipments cannot be eliminated.

<sup>2</sup> See Chart II on pages 28 and 29.

<sup>3</sup> Refer to *Testimony Presented on Behalf of the Pennsylvania Railroad before the Interstate Commerce Commission in Its Investigation of the Relations between Rail and Highway Transport Service*, Washington, D. C., March 4, 1931.

## COÖRDINATED RAIL AND TRUCK TRANSPORTATION

*Non-scheduled expedited service.*—Non-scheduled expedited service for rush shipments can be provided only by operating small trucks over the road at any time of day desired by the shippers and not as a part of the regular coördinated rail-truck service, which must be operated on schedule.

## CHAPTER II. THE RAILWAGON SYSTEM OF COÖRDINATED TRANSPORTATION

**T**HE railwagon system is at present in operation on the Lake Shore Electric Railway between Cleveland and Toledo, Ohio. This system has the possibilities of being successfully adapted to steam railroad practice to serve as a basis for coördinating rail and motor truck transportation.<sup>1</sup> Accordingly, an outline of the essential features of this system, together with several possible modifications, is presented.

### RAILWAGONS

A railwagon is a specially constructed highway semitrailer that can be drawn over the city streets or highways and that also can be carried over the railroad. In the latter operation the railwagons are carried on a special railroad flat car with the wheels hanging over the sides of the car.

A railwagon is substantially a container unit fixed on a chassis equipped with "single" rear wheels and solid tires. The wagon weighs about 9,000 pounds and it is 18 feet long by 8 feet wide. The rated carrying capacity has been fixed at 20,000 pounds.<sup>2</sup>

The over-all dimensions of the railwagon car conform to those of the box car. The distance of the railwagon wheels above the track is greater than the corresponding distances of the journal boxes, so there is no danger of these wheels hitting obstructions on the track.

Some of these railwagons should be provided with a door or opening at the sides or top, in addition to those with doors at the end, as shown in Figure 1, in order to meet the loading requirements of various shippers. Possibly it may be found economical to construct the

<sup>1</sup> This statement is based entirely on a consideration of the physical and operating characteristics of this system. It should be pointed out that other considerations, such as the investment cost of new equipment and facilities to both the railroad and truckers might outweigh any operating advantages that this system may possess over another.

<sup>2</sup> See Tariff Schedule on page 43.



## THE RAILWAGON SYSTEM

bodies of these units of an aluminum alloy, so as to cut down the dead weight which has to be transported. These units are equipped with the standard coupling device at present used on most trailers. They may be hauled in "trains" from the shippers' plants to the railhead, or as single trailer units. Generally, the number of trailers which may be hauled by a tractor is restricted by city ordinances.

The coupling device on the tractor and the "dolly" under the rear railwagon are standard highway equipment. Many cartage and motor highway companies now operate tractors that can handle railwagons without any change in their existing equipment.

### LOADING RAMP

The loading ramp, located at the railhead, automatically transfers the railwagons from the highway to the flat car and *vice versa*. It is a simple affair of substantial construction without moving parts. It consists of a platform designed to accommodate a number of railwagons<sup>3</sup> and a lead-off rampway located on the rail end. The ramp shown in Figure 2 is designed to accommodate three railwagons, but additional capacity is merely a matter of additional platform length.

The tractor brings the railwagons to the railhead at any time of day and deposits them on the platform of the ramp. It is not necessary for the tractor or driver to be present when the railwagons are being loaded upon or unloaded from the flat cars.

### FLAT CAR EQUIPMENT

The flat car equipment is of all-steel construction and is specially designed to carry three railwagons per car. The journal bearings on this equipment are located inside the wheels instead of outside. The space thus made available is utilized by the wheels of the railwagon which overhang the sides of the car. By this means, the dimensions of these cars loaded with their complement of three railwagons each are kept within the standard A.R.A. clearance limits. The "latch," just above the trucks, as shown in Figure 3, is used to couple the rail-

<sup>3</sup> The special flat cars are designed to carry three railwagons each, hence this number would be some multiple of three.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

wagons loosely to the body of the car. The handbrakes are so constructed that they can be readily removed for the loading and unloading operation.

### THE LOADING OPERATION

The first step in the loading operation is to push the flat car or cars under the railwagons standing on the platform of the ramp. When this movement has been completed, the railwagons stand over, and clear of, the deck of the car. They are then coupled loosely to the latter by means of the "latches." These "latches" are swung upward into a horizontal position and engage lugs attached to the underside of each railwagon frame. (See Figure 4.)

The car is then drawn forward on the track and pulls the railwagons with it from their original position. They roll along the platform, down the incline, and automatically come to rest in their proper position for the rail haul, as shown in Figure 5.

In the unloading operation the reverse action takes place. That is, the railwagons climb the incline and rise clear of the car.

### RAIL TERMINAL FACILITIES

The flexibility and simplicity of the loading and unloading process is one of the salient features which renders this system especially adaptable to operation in terminal areas where the volume of traffic to be handled is large. The transfer of the container units between the highway and flat cars is performed by a single switching move without the necessity of being handled by crane or derrick.

A proposed layout of railhead terminal facilities, such as would be required for the operation of this system in a heavy traffic zone, is presented on page 49. The track layout is designed to facilitate the necessary switching operations. The loading ramps are constructed to accommodate nine railwagons each, the quota for three cars. It was felt that this was the maximum length of ramp which would give flexible operation. Hence, additional capacity should be provided by adding more tracks and not by lengthening the ramp platforms.

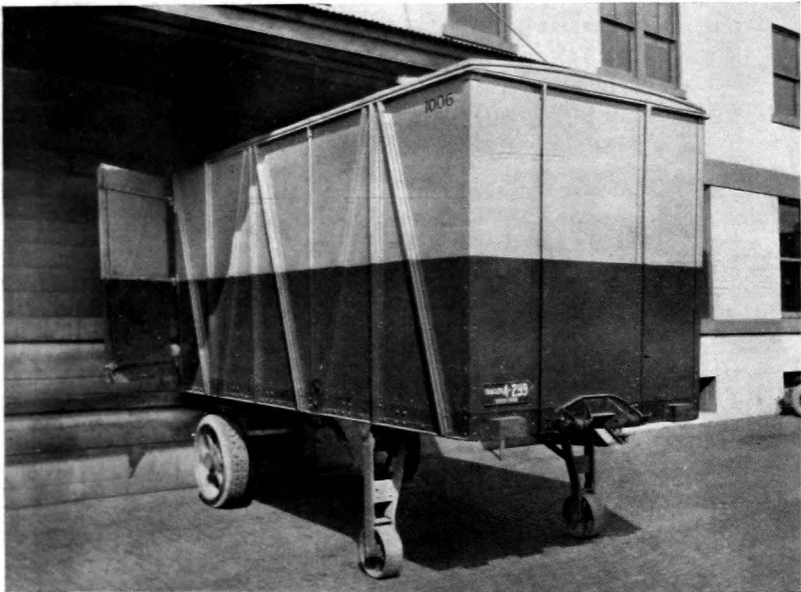


Figure 1. Railwagon at Shipper's Plant.

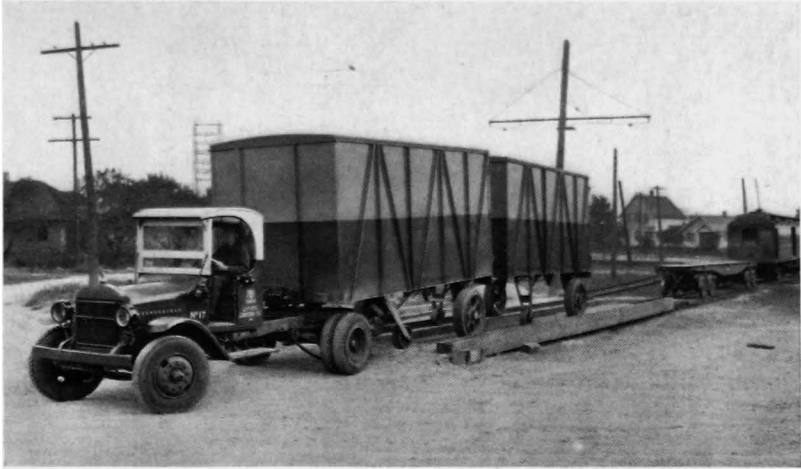


Figure 2. Railwagons Being Placed on Loading Ramp at Railhead.

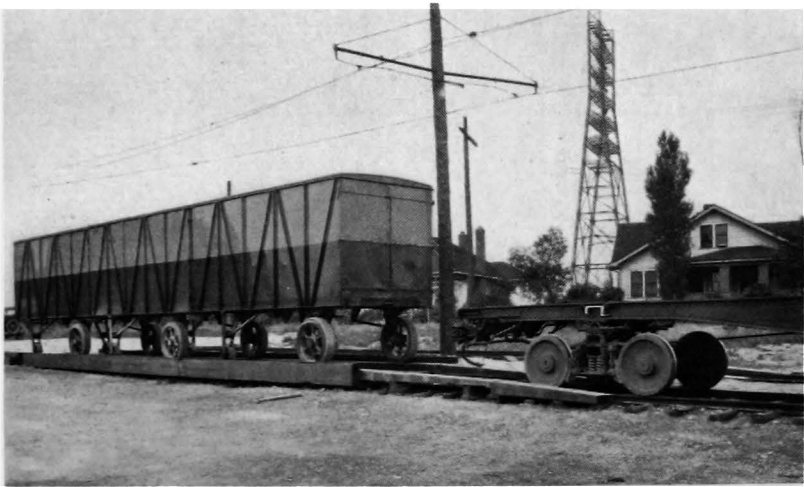


Figure 3. Railwagons on Ramp with Flat Car Approaching.

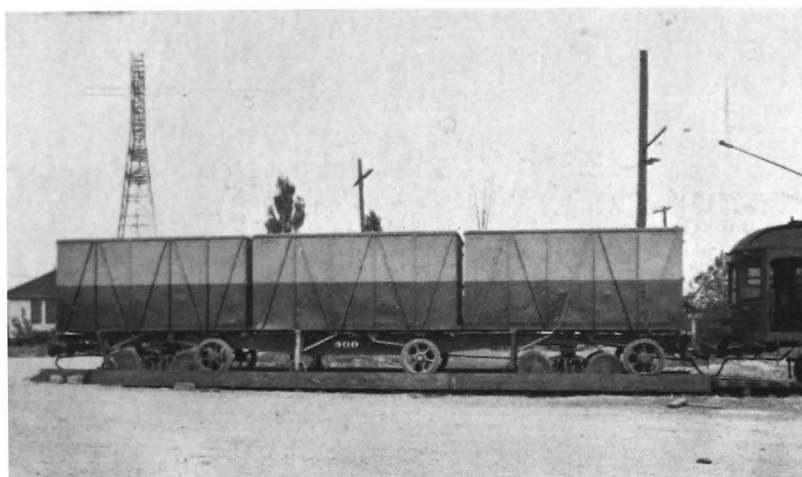


Figure 4. Flat Car in Place under Its Quota of Three Railwagons.

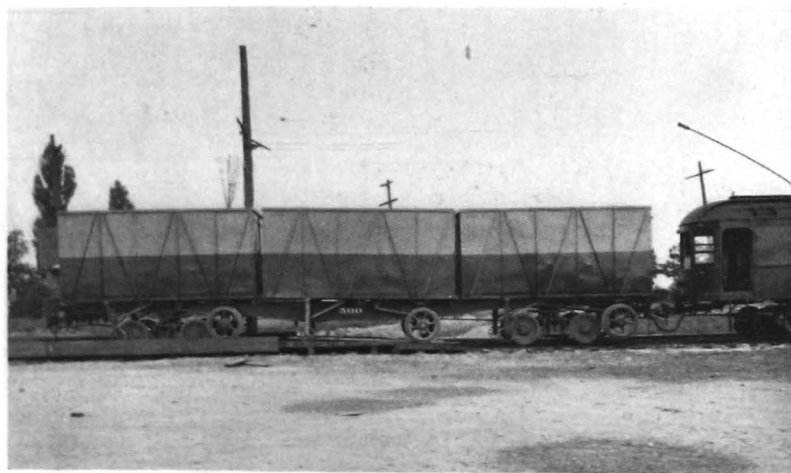


Figure 5. Loading Railwagons on Flat Car.

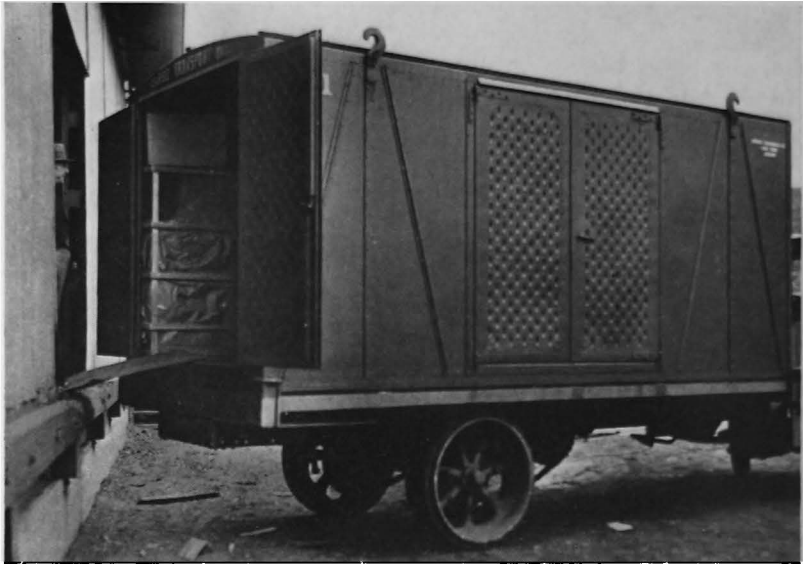


Figure 6. Truck-body Container on Truck.

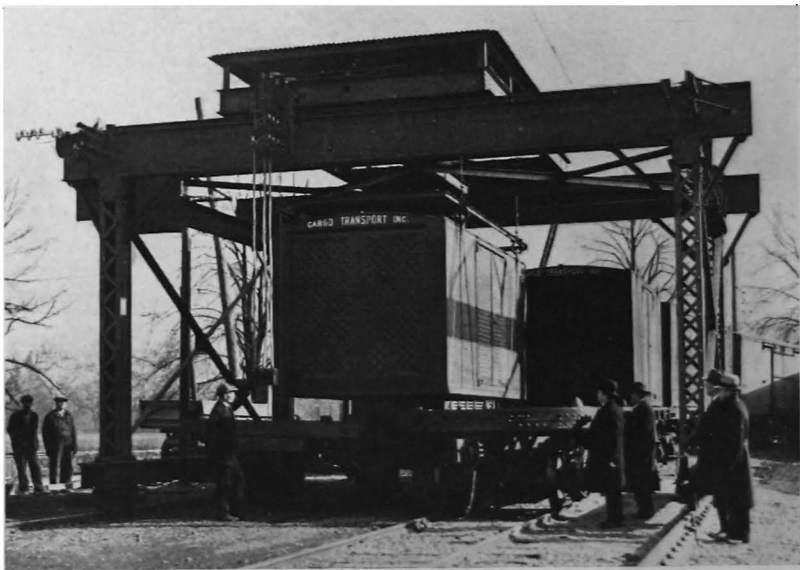
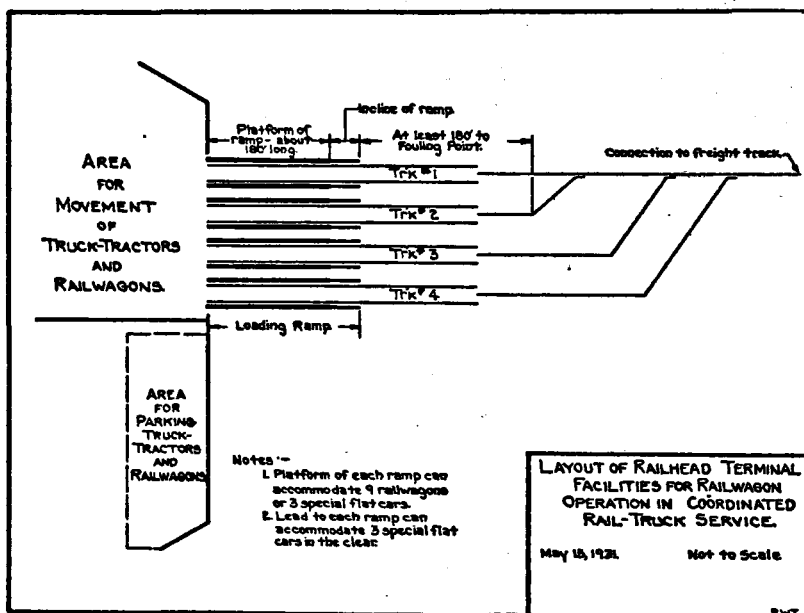


Figure 7. Lifting Truck-body Container from Truck to Flat Car.

## THE RAILWAGON SYSTEM

### THE RAIL HAUL BETWEEN TERMINALS

A special train made up entirely of railwagon cars can be run nightly, if the amount of traffic handled by this system between two cities is large enough to warrant it. If the amount of traffic does not warrant the operation of a special train, these cars can be handled on a scheduled fast freight which runs nightly between the cities involved.



## CHAPTER III. TRUCK-BODY CONTAINER SYSTEM OF COÖRDINATED TRANSPORTATION

**T**HE truck-body container system of coördinated transportation is at present in operation on the Cincinnati and Lake Erie Railroad between Cincinnati and Toledo, Ohio. This system has the possibility of being readily adapted to steam railroad practice to serve as a basis for coördinating rail and motor truck transportation.<sup>1</sup> Its operation is essentially the same as the operation of the railwagon system, except for the difference in methods of handling the container units. The following paragraphs describe the truck-body container unit and the manner in which the rail and highway carriers handle it.

### TRUCK-BODY CONTAINERS

The truck-body container is an all-steel unit 17½ feet long, 8 feet wide, and 7½ feet high. As its name implies, it is a portable truck body specially designed in order that it may be readily interchangeable between rail and highway transport. It is provided with doors in the middle of each side, and in appearance it resembles the body of a box car. (See Figure 6.)

This unit is hauled over the city streets on a motor truck or trailer chassis, so constructed as to securely hold the unit in place. After these units have been loaded, a seal is placed on each of the four doors before delivery to the railhead.

### THE LOADING OPERATION

Each truck-body unit is equipped with four lifting hooks located on the sides of the unit at the top. A gantry crane is installed at the rail terminal over the tracks devoted to rail-truck service. Upon arrival at the terminal, the unit is lifted from the truck chassis by

<sup>1</sup> The Pennsylvania Railroad recently announced that there was soon to be inaugurated a similar system of coördinated motor truck, steamer, and rail transportation between Baltimore and Salisbury, Maryland.



## TRUCK-BODY CONTAINER SYSTEM

means of the crane and a suitable grappling device which engages the lifting hooks. It is then placed on a specially designed flat car which has previously been spotted under the crane. (See Figure 7.)

The flat cars are equipped with anchorage devices for centering and firmly holding the containers. When a container is lowered by the crane onto a flat car, the anchorage devices automatically lock all four doors of the unit so that theft is impossible. Each flat car is built to carry two of these units.

After every interchange operation performed by the crane between the truck and flat car, a shifting movement is necessary in order to "spot" a car in the proper position under the craneway for the next operation. This involves "spot" and "pull" movements for each unit handled. It would appear that this operation lacks the speed necessary for a single crane to handle a large amount of traffic in as short a time as would be necessary with overnight delivery between cities two hundred miles apart.

### THE OPERATION ON THE CINCINNATI AND LAKE ERIE

For the service on the Cincinnati and Lake Erie, the Motor Terminals Company of Cincinnati owns the container units and the special gantry cranes located at the railheads. Cargo Transport, Inc., a group of affiliated trucking companies, leases this equipment, transports the containers locally, and deals directly with the shippers. A container is furnished to a company for direct loading, if its shipments warrant it. When the loadings from one shipper are not of "container load" volume, the freight is collected by small trucks and taken to the inland freight terminal where various shipments are consolidated into a container load. The container is then moved on the special truck chassis to the railhead.

The Cincinnati and Lake Erie carries the containers between the two cities under a minimum tariff of thirty cents per container rail mile. The railroad is responsible for the terminal expenses of crane operation and switching movements, and for damage to the container or its contents by a wreck or avoidable abuse while the unit is in its custody.

In the adaptation of this operation to steam railroad practice, the

## **SHIPPING BETWEEN NEW YORK AND PHILADELPHIA**

**railroad itself might well own the containers and cranes and contract with truckers to perform the local cartage for them. In this manner they would be able to deal directly with the shippers on a through rate basis.**

## **APPENDICES**

## APPENDIX I. CASE HISTORY OUTLINE

### OUTLINE OF THE FORM USED IN PRESENTING THE DATA IN EACH CASE HISTORY

CASE No. —

- A.* Finished products of the company.
- B.* Location of the company's plants in the area studied.
- C.* General description of the company's business in so far as it is related to the transportation problem.
  - 1. Products.
  - 2. Market for the products.
  - 3. Location of other plants outside of this area.
- D.* Outline of the transportation set-up.
  - 1. Shipment of raw materials.
    - a. Principal commodities.
    - b. Origin.
    - c. Means of transportation.
  - 2. Interplant shipments.
    - a. Articles shipped.
    - b. Plants involved.
    - c. Means of transportation.
  - 3. Shipment of finished products.
    - a. Description of the transportation set-up for shipping the company's finished products to various points.
- E.* Miscellaneous data.
  - 1. Siding facilities of the plant.
  - 2. Description and use of the company's own trucks.
  - 3. Payer of freight charges on shipment of finished products.
  - 4. Way in which the factory production is scheduled.
  - 5. Method of packing the products for shipment.
- F.* An analysis of the reasons for shipping by motor truck. The following factors are considered when pertinent:
  - 1. Cost of service.
  - 2. Reduction in total shipping time.
  - 3. Consideration of loss and damage and settlement of claims.
  - 4. Prompter service for rush shipments.
  - 5. Ability of transportation agencies to meet the shipper's problems.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

- G. Data relating to truck shipments between New York and Philadelphia.
1. Commodities which are trucked.
  2. Amount shipped by truck per month under present business conditions.
  3. Trucking companies handling the business.
    - a. Reasons for selection.
    - b. Description of truckers' facilities.
  4. Length of time truck transportation has been used in this service.
  5. Service arrangement with truckers.
  6. Closing hour for receipt of freight.
  7. Nature of the consignees in this area.
  8. Rail rate data between New York and Philadelphia for this shipper's commodities.
    - a. Carload and less-than-carload rates for rail haul.
    - b. Local cartage rates.
  9. Use of containers.
  10. Trucking rates.
  11. Nature of trucking rate agreement—publication of a tariff by the truckers.
  12. Provision for plant pick-up and store-door delivery by truckers.

## APPENDIX II. INDUSTRY CASE HISTORIES

(The names of companies are disguised or eliminated to prevent identification.)

### CASE NO. I

- A. Paper.
- B. One plant in Philadelphia.
- C. *Description of the business:*
  - 1. This company manufactures a complete line of printing paper and specializes in high-grade gloss paper.
  - 2. It sells its high-grade products to paper jobbers located in some of the principal cities throughout the country. It sells its lower grade papers mainly within a radius of a 30 cent per cwt. freight rate because it cannot meet competition outside of this range. One third of its business is in the New York City area.
  - 3. It has no other plants.
- D. *Outline of the transportation set-up:*
  - 1. *Shipment of raw materials:*
    - Wood pulp from Finland by water.
    - Clay from England by water.
    - Casein from the west coast in carloads by rail.
    - Starch from New York State and the Middle West in carloads by rail.
    - Soda pulp from the South in carloads by rail.
    - Coal from the Pennsylvania coal region in carloads by rail.
    - Waste paper from Philadelphia by truck.
    - Alum from Philadelphia by truck.
  - 2. *Interplant shipments:* none.
  - 3. *Shipment of finished products:*
    - A complete line of printing paper is sold through distributing jobbers.
    - Goods are shipped to Boston, Baltimore, and the West Coast by water.
    - All shipments to New York City and for Philadelphia delivery are made by motor truck.
    - Shipments to all other points go by rail in carload or less-than-carload lots.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

### *E. Miscellaneous data:*

1. This plant has connections with two railroads and extensive track facilities of its own, so that it can take full advantage of the cheap switching rates in Philadelphia (5 cents per cwt.).
2. This company owns ten trucks which are used to make local deliveries and to pick up any less-than-carload inbound material.
3. Its products are sold f.o.b. mill with the carload rate of freight allowed, so that jobbers must pay any excess due to less-than-carload or truck shipment.
4. Its production schedule is set according to business conditions to maintain necessary stock except in special lines where production is to order.
5. Its products are shipped in cases, rolls, and skids. The skids are for direct mounting on printing presses.

### *F. Reasons for shipping by truck:*

1. The cost of shipping is not a factor. It averages about the same whether by truck or by rail. The New York jobbers are allowed the carload rate on shipments and pay any excess themselves.
2. Trucks give quicker and more direct service. The overnight store-door delivery permits the jobbers to carry little or no inventory. New York jobbers may place their orders up to 3.00 P.M. on a given day and have delivery the following morning at their warehouses.
3. Trucks eliminate rehandling. These same road trucks are often used by the jobbers to distribute to the printers, which in many cases saves rehandling, as the jobber has only to give the trucker delivery instructions for his load. This truck delivery to the jobber's customers is made for a slight additional charge and permits through delivery from plant to printer by nine o'clock any morning, an important factor in meeting competition.
4. The trucker provides rush service for special shipments whenever necessary and charges on the basis of a full truckload.
5. The loss and damage is felt to be less by truck but not enough to be taken into consideration. Settlement of claims is prompt by both trucker and railroads.

### *G. Data relating to truck shipments to New York City:*

1. Various grades of printing paper are trucked to New York City. There is no movement by truck in the reverse direction.
2. Approximately 840,000 lbs. per month are being trucked to this area

## INDUSTRY CASE HISTORIES

under present business conditions, which are about 70 per cent of normal for this concern.

3. J. H. Manson Company is its trucker for this service. This trucker is used because he knows the delivery requirements of the printing paper users in New York City. He is familiar with the requirements of all its customers. He knows how to unload paper, and his trucks are equipped with winches for this purpose. His rate is normal, his service is reliable, and he is insured to the extent of \$25,000 per truckload.
4. This concern has been shipping to New York City by truck for about eight years.
5. The trucker has an office and garage on the grounds of the company so that its shipping department is always in close touch with the trucker. The trucker places several trucks each day for the company to load at its convenience.
6. The trucker accepts freight at any time, if necessary.
7. The company sells entirely to distributing jobbers in this area.
8. The rail rates for printing paper are:  
Carload lots—sixth class, 18.5 cents per cwt.  
Less-than-carload lots—third class, 22.5 cents per cwt.  
New York City local cartage rates to 59th Street for printing paper are:  
Carload lots—11 cents per cwt.  
Less-than-carload lots—13 cents per cwt.
9. The company is not able to use containers for its products due to their lack of flexibility in size.
10. The trucking rate is 27 cents per cwt. for delivery from the Philadelphia plant to the distributing jobber's store door. An additional charge of a small amount is made for delivery from the jobber to his customers.
11. The trucking rate is by special agreement. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the consignee's store door.



## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

### CASE No. 2

**A. Paper products.**

**B. One plant in Philadelphia.**

**C. Description of the business:**

1. This company manufactures all kinds of plain and colored cardboards and photograph mountings. It makes a large amount of fancy cardboard for use as advertising matter.
2. Its products are distributed all over the country. It sells mainly to stock jobbers located in the larger cities.
3. It has no other plants.

**D. Outline of the transportation set-up:**

**1. Shipment of raw materials:**

Paper from various parts of the country in carload and less-than-carload lots by rail.

Colors from the Philadelphia area by truck and from England by water.

Sizing from various parts of the country in carload and less-than-carload lots by rail.

Anthracite coal from Pennsylvania in carload lots by rail.

**2. Interplant shipments:** none.

**3. Shipment of finished products:**

The local and New York City area delivery is entirely by truck.

Shipment to Boston is entirely by water, and to Baltimore and the Pacific Coast partly by water.

Shipment to all other points is by rail, mostly in less-than-carload lots.

Occasional shipments are made by parcel post and express when so specified by the customer.

**E. Miscellaneous data:**

1. This plant has one railroad siding.
2. It owns two motor trucks which are used for local deliveries and for pick-up from and delivery to the various freight stations.
3. This company pays the trucking charge on all shipments to New York City. Goods to other points are sold both f.o.b. plant and freight prepaid, depending on the city to which they are being shipped.
4. Its production schedule is set according to business conditions to maintain the stock which it carries to fill orders.

## INDUSTRY CASE HISTORIES

5. Its products are packed for shipment in wooden cases, except those for local delivery which are wrapped in heavy paper.

### *F. Reasons for shipping by truck:*

1. The cost factor is the main consideration. The cost of shipping its products by truck to New York City is definitely less than by rail. This saving enables it to meet the strong competition in this area.
2. The store-door overnight delivery furnished by truck is useful. The trucker guarantees delivery before 10.30 A.M. As a result of this fast service the jobbers with whom the company deals carry greatly reduced stocks. This has shifted to the manufacturing company the necessity of carrying the inventory. However, in reality the total stock carried by the jobbers and the company has been greatly reduced, because of the general speeding up of all forms of transportation in recent years. This shifting of the necessity of carrying inventories from the dealers to the manufacturers is a recent trend in industry which has accompanied the speeding up of transportation. The New York City jobbers in the paper products line have carried this tendency so far as to order each day for the next day's supply.
3. Loss and damage to its products is negligible by both rail and motor truck shipping.

### *G. Data relating to truck shipments to New York City:*

1. Plain and colored cardboards and photograph mountings are trucked to New York City.
2. Approximately 60,000 lbs. per month are being trucked to this area under present business conditions.
3. J. W. Plotkin is the company's trucker for this service.
  - a. This trucker is used because he provides reliable service at a normal rate. He has furnished a statement of adequate insurance.
  - b. This trucker operates large trucks over the road nightly between the freight terminals which he maintains in both New York and Philadelphia. He distributes from these freight terminals by means of smaller trucks. The road trucks are of 20-ton capacity.
4. This concern has been shipping to New York City by truck for about nine years.
5. The trucker calls every day before closing time unless told to call at a later hour.
6. The trucker accepts freight up to 9.00 P.M.
7. The company sells mainly to stock jobbers in this area.
8. The rail rates for the company's products are:

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

Photo mountings: Less-than-carload lots—first class or 41.5 cents per cwt. (Never shipped in carload lots.)

Cardboards: Less-than-carload lots—third class or 28.5 cents per cwt.

Carload lots—sixth class or 18.5 cents per cwt.

New York City local cartage rates depend on the part of the city or zone to which delivery is to be made, ranging from 40 cents to \$1.00 per cwt. for less-than-truckload lots.

9. It cannot use containers advantageously, because its shipments to any given consignee are generally not large enough to load a container to economic advantage.
10. The trucking rate is 40 cents per cwt. for delivery to the jobber's store door. The rate is 65 cents per cwt. for delivery to steamship docks, the 25 cents additional being charged because of the congestion at most docks, which causes considerable time to be spent in making deliveries.
11. The trucking rates are by special agreement. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the consignee's store door.

## INDUSTRY CASE HISTORIES

### CASE No. 3

A. Paper products.

B. One plant in Philadelphia.

C. *Description of the business:*

1. The company manufactures paper box flats, machinery for assembling the flats into boxes, and metal edging for the boxes. It sells the assembling machinery to any concern wishing to use its boxes, and supplies the paper box flats and metal edging to these concerns as needed.
2. It sells its boxes throughout the country and does some exporting. A wide variety of manufacturers use these boxes for the unit packing of their products.
3. It has no other plant.

D. *Outline of the transportation set-up:*

1. *Shipment of raw materials:*

Pulp board from West Virginia and Louisiana in carload lots by rail.

Printing inks from Philadelphia by motor truck.

Machine steel from Pittsburgh in carload lots by rail.

Cast iron castings from Philadelphia by motor truck.

Strip steel from Massachusetts in carload lots by rail.

Coal from Pennsylvania regions in carload lots by rail.

2. *Interplant shipments:* none.

3. *Shipment of finished products:*

Local deliveries are made with its own motor trucks.

Shipments to the New York City area are very largely by motor truck.

Occasional carload shipments are made by rail to industrial sidings in this area.

Shipments are also made by motor truck to the following points: Baltimore, Washington, New Haven, Providence, and Boston.

Shipments are made by water to Baltimore and Boston. The company claims that it is able to get faster service to these cities by water than by rail.

Shipments to southern points are made by a combination of water and rail via Norfolk or Savannah at a saving in shipping cost.

Shipments to all other points move by rail in both carload and less-than-carload lots (about 30 per cent carload and seventy per cent less-than-carload).

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

### *E. Miscellaneous data:*

1. This plant has no railroad siding.
2. This company owns eight trucks which are used for local delivery and for pick-up from and delivery to the various freight stations.
3. Its products are all sold f.o.b. Philadelphia.
4. It manufactures only to order, as every order has special requirements suited to the needs of the customer. It carries no standard line.
5. The paper box flats are packed for shipment in bundles of various sizes, bound together by metal strapping. The assembling machinery and metal edging are shipped in wooden crates.

### *F. Reasons for shipping by truck:*

1. Cost is not a factor. It is more expensive to ship by truck than by rail to New York City.
2. The trucker gives quicker and more direct service. The overnight store-door delivery permits the company's customers to carry a smaller stock of supplies and eliminates the necessity for large storage facilities. It is felt that the present business depression accentuates the need for such service, and as a result business will go to the truckers which the railroads never will get back.

### *G. Data relating to truck shipments to New York City:*

1. Paper box flats, metal edging, and assembling machinery are trucked to the New York City area regardless of the size of the shipment.
2. Approximately 50,000 lbs. per month of paper box flats are being trucked to this area under present business conditions.
3. The Interallied Trucking Company is the trucker for this service.
  - a. This trucker is used because he provides reliable service at a normal rate. He is considered to carry adequate insurance.
  - b. His trucking company is one of the larger ones in the field and has a local freight distributing center in each of the two cities.
4. This concern has been shipping to the New York City area by truck for about ten years.
5. It notifies the trucker by telephone each day of the amount which it has for him to move that night.
6. The trucker accepts freight up to 5.30 P.M. each day.
7. This concern sells its metal-edged boxes to manufacturers for use in packing their small articles.
8. The rail rates for paper box flats are :

## INDUSTRY CASE HISTORIES

- a. Less-than-carload lots—third class, 28.5 cents per cwt.  
Carload lots—fifth class, 19.5 cents per cwt.
- b. The New York City local cartage rate is about 10 cents per cwt. to points below 48th Street.  
The Philadelphia local cartage, with the company's own trucks, costs it about 6 cents per cwt.
9. The company does not use containers as it cannot utilize them to economic advantage or obtain store-door overnight service with them.
10. The trucking rate for paper box flats is 50 cents per cwt.
11. The trucking rate is by special agreement. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the consignee's store door.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

### CASE No. 4

#### A. Textiles.

#### B. One plant in Philadelphia.

#### C. Description of the business:

1. This company dyes and finishes woolens and worsteds. It is purely a service corporation for the knitters and weavers of this class of textiles.
2. It bills the manufacturers of the cloth for its services and delivers the finished goods mainly to the clothing manufacturers in New York City.
3. It has no other plant.

#### D. Outline of the transportation set-up:

##### 1. Shipment of raw materials:

Dyestuffs from Philadelphia by motor truck.

Scouring soaps and oils from Philadelphia by truck and from Rome, N. Y., by rail in less-than-carload lots.

Coal from Pennsylvania regions by rail in carload lots.

Incoming textiles are mainly from New England. They are shipped to New York City by boat and are trucked from New York City to the plant. A small quantity of textiles is received from the South by rail in less-than-carload lots.

##### 2. Interplant shipments: none.

##### 3. Finished products:

The company's finished products for delivery are dyed and finished textiles.

Local deliveries are made with its own motor trucks.

Deliveries to New York City are made entirely by outside truckers.

This movement amounts to 90 per cent of the company's output.

Shipments to Baltimore and Wilmington move by boat.

Shipments to all other points move in less-than-carload lots by rail and express.

#### E. Miscellaneous data:

1. This company has no railroad siding.
2. This company owns five trucks which are used for local deliveries and for pick-up from and delivery to the various freight stations.
3. It pays the trucking charges on its deliveries to New York City. It also pays the cost of trucking the incoming textiles from New York City. The company stores these textiles without charge as a service

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accommodation, until the owner specifies that they be dyed and finished for immediate delivery.

4. Its production schedule is based entirely on the orders from its customers.
5. Its finished textiles are packed for shipment in paper-wrapped rolls, in burlap-covered bales, or in wooden cases.

### *F. Reasons for shipping by truck:*

1. Cost is not a factor. It is more expensive to ship by truck than by rail to New York City.
2. The trucker gives quicker and more direct service. The overnight store-door delivery insures receipt of the goods by the clothing manufacturers in New York City before 10.00 A.M. each day. This allows the company to give prompt service, since it dyes and finishes the goods only after they have been actually ordered by the clothing manufacturer from the knitter or weaver. The company claims that it takes three days to get store-door delivery to New York City when shipping via rail.
3. Loss and damage is negligible both in shipping by rail and by motor truck. This company carries insurance covering all goods in transit.

### *G. Data relating to truck shipments to New York City:*

1. Woolens and worsteds are trucked from New York City to the plant. After these textiles have been dyed and finished, they are trucked to the clothing manufacturing district in New York City.
2. Unfinished textiles trucked from New York average 300,000 lbs. per month. Finished textiles trucked to New York average 400,000 lbs. per month.
3. This company employs the Benjamin Brown Trucking Corporation as its trucker. However, some of the knitters and weavers in New England employ the J. W. Plotkin Trucking Corporation and the company makes it a practice to give this trucker a return load whenever goods are received from them.
  - a. The Benjamin Brown Trucking Corporation is used for several reasons: It has adequate facilities for giving good service, since it owns about seventy-five road trucks. It is well known and experienced in the textile industry. Its rate is about normal for a reliable trucker. It is known not to carry liquor. It is adequately insured and has a good financial standing.
  - b. The trucker maintains freight stations in both cities for handling



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the local distribution of less-than-truckload shipments. Small trucks are used to provide fast service in this local distribution.

4. This textile company has been shipping to the New York City area by truck for about ten years.
5. The trucker calls at the plant every day before closing time. The textile company does not have an entire truckload for New York City every day except when business is better than at present.
6. The trucker will wait with his truck until late in the evening if necessary.
7. The consignees in this area are clothing manufacturers located in the textile district of New York City.
8. The rail rates for finished textiles are:  
Less-than-carload lots—first class, 41.5 cents per cwt.  
No shipments of carload size are made.  
The New York City local cartage rate is about 25 cents per cwt.
9. This company does not use containers as it is not able to load them to economic advantage and cannot obtain overnight delivery with them.
10. The trucking rate is 70 cents per cwt. for both the unfinished and finished textiles. The minimum charge for any one package is 70 cents, consequently the textile company makes up packages weighing at least 100 lbs.
11. The trucking rate is by special agreement. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the consignee's store door.

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### CASE No. 5

**A. Textiles.**

**B. Several plants in Philadelphia.**

**C. Description of the business:**

1. This company manufactures all types of velvets and plush.
2. Its products are marketed throughout this country and abroad. It maintains its own sales organization and sells directly to wholesale customers who are mainly automobile upholsterers and department stores.
3. This company has a number of plants located throughout the East, all producing about the same class of goods.

**D. Outline of the transportation set-up:**

**1. Shipment of raw materials:**

Yarn from the South and New England by water and by rail in carload lots.

Latex from Connecticut by rail in carload lots.

Coal from Pennsylvania coal regions by rail in carload lots.

**2. Interplant shipments:**

This concern has several plants and warehouses located in Philadelphia. It uses its own motor trucks for shipping products in various stages of production between these plants, and for shipping finished products to the warehouses.

**3. Shipment of finished products:**

All shipments to New York City are by motor truck.

All deliveries in Philadelphia are by its own motor trucks.

Shipments to other points move by water or by rail in either carload or less-than-carload lots.

**E. Miscellaneous data:**

1. All except one of the plants in the Philadelphia area have siding facilities on one or the other of two railroads.
2. This concern has its own fleet of twenty trucks which is used for deliveries to local customers and for pick-up from and delivery to local freight stations.
3. Its products are sold f.o.b. the mill, except those moving by truck to local points and to New York City, on which the trucking charge is paid by the company.
4. Its production is scheduled both to maintain a stock and to fill special orders.
5. Its products are packed in sewn burlap bales and fiber cartons.

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### *F. Reasons for shipping by truck:*

1. The trucker gives quicker and more direct service. Overnight store-door delivery places goods at the customer's door for opening time, thereby permitting customers to carry a minimum stock.
2. The product is of an expensive nature so that the loss due to the destruction of an entire truckload is large. Therefore the company is obliged to carry its own insurance to protect against loss of its goods moving by truck, since the insurance carried by the truckers is not adequate. For this reason it would prefer to ship by rail if the requisite service were provided.
3. The trucker makes special trips to New York at any time to provide rush service.

### *G. Data relating to truck shipments to New York City:*

1. Velvets and plush are trucked to New York. There is no movement by truck in the reverse direction.
2. Approximately 200,000 lbs. per month, about 50 per cent of normal, is trucked to New York at present.
3. Donald Smith & Sons is the company's trucker.
  - a. The company has been dealing with this trucker for many years, and his service is considered to be adequate and reliable. His rate is about normal for a reliable trucker.
  - b. This trucker carries insurance, but it is not adequate to cover a truckload of the company's products.
4. This company has been shipping to New York City by truck for about twelve years.
5. The trucker telephones the company's shipping department every day to find out the shipping requirements for the day.
6. The trucker receives freight at any time desired.
7. The principal consignees are automobile upholsterers and department stores.
8. The rail rates for velvet and plush are:  
Carload lots—first class, 41.5 cents per cwt.  
Less-than-carload lots—special commodity rates.  
New York City local cartage rates for these commodities are 25 cents per cwt. for carload quantities.
9. This company does not use containers because it is not able to get as prompt deliveries with them as by motor truck.
10. The trucking rate is \$1.00 per cwt. for delivery from the Phila-

## INDUSTRY CASE HISTORIES

delphia plant to the store door or to the company's own warehouse in New York City.

11. The trucking rate is by special agreement. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the consignee's store door.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

### CASE No. 6

- A.** Bulk chemicals.
- B.** One plant in Philadelphia.
- C.** *Description of the business:*
1. This company manufactures raw chemicals in bulk.
  2. It produces raw chemicals for certain large industrial users. It also sells a considerable amount of its products in small quantities to miscellaneous consumers. The output of the Philadelphia plant is largely distributed in the eastern industrial area of the country. Its products are sold directly to the industries using bulk chemicals.
  3. It has several other plants scattered throughout the country.
- D.** *Outline of the transportation set-up:*
1. *Shipment of raw materials:*  
Sulphur from Texas shipped by water.  
Bauxite from South America shipped by water.  
Phosphate rock from Florida shipped by water.  
Coal from Pennsylvania shipped in carload lots by rail.
  2. *Interplant shipments:* none.
  3. *Shipment of finished products:*  
All carload lots for local points and some for New York are shipped by truck.  
All less-than-carload shipments for the following points are made by truck: New York City, Allentown, Reading, and South Jersey points.  
The remainder of the output moves by rail largely in carload lots.
- E.** *Miscellaneous data:*
1. The Philadelphia plant of this concern has a rail siding.
  2. This company operates its own fleet of five trucks for local delivery of its products and for service to freight stations.
  3. This company pays all shipping costs on the finished products. The freight charge is included in the sale price. This is true throughout the bulk chemical industry.
  4. The factory production schedule is set to maintain a stock, the size of which depends on business conditions.
  5. Acids shipped to oil refineries and paper mills.  
Sulphate of alumina and alum shipped to paper mills.  
Acid phosphate shipped to manufacturers of fertilizers.  
Copperas shipped to paint manufacturers.  
Acids are shipped in tank cars, carboys, and steel drums. The other products are packed in bags or barrels or loaded in cars.

## INDUSTRY CASE HISTORIES

### *F. Reasons for shipping by truck:*

1. The main item of consideration is the lower cost of shipment by truck for less-than-carload lots. Competition in New York is very keen, and the cost of shipping is an important item in meeting this competition by means of a lower sale price.
2. The store-door delivery and overnight service afforded by trucks is an important consideration as regards its shipments to New York City. Trucks give overnight delivery to consignees in New York City, as compared with the two-day service afforded by rail and local truck delivery. This expedited truck service has caused some of its customers who formerly ordered in carload lots to order in smaller lots and so cut down their inventories.
3. Loss and damage is not a consideration because of the nature of the products.
4. Trucks are occasionally used for rush shipments.
5. C.O.D. shipments can be made by truck to small consumers who have no credit relations with the company. Shipments of alum are sent in this manner to many small statuary makers in New York City.

### *G. Data relating to truck shipments to New York City:*

1. Acids, sulphate of alumina, alum, acid phosphate, and copperas are trucked to New York City.
2. An average of 180,000 lbs. is shipped by truck to New York City each month.
3. The John Doe Trucking Company performs all the company's trucking to New York City and northern New Jersey points.
  - a. This trucker was selected because he offered the lowest rates commensurate with adequate service facilities. He has been in business for about nine years and is considered to be adequately insured. He makes prompt settlement of all claims.
  - b. He provides service between Philadelphia and New York City. Trucks are operated over the road each night.
4. This company has been using trucking service for the past eight years.
5. The trucker is notified by telephone when his services are required.
6. The trucker prefers to be notified before 2.00 P.M. and accepts freight for next day delivery up to 5.00 P.M.
7. This company distributes its products directly to manufacturers in New York City.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

8. There are various rail class rates, depending upon the product involved.
9. Shipments are not made by containers due to the inflexibility of the service and to the fact that some of the company's products cannot be loaded to advantage in containers.
10. The trucking rates for the various finished products are about the same as the corresponding less-than-carload rail rates. Therefore, the cost of the local cartage on both ends of the rail haul is saved when shipments are made by truck.
11. The trucking rates are by special agreement. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them at the consignee's store door.

## INDUSTRY CASE HISTORIES

### CASE No. 7

**A. Chemicals.**

**B. The main plant is in New York City and another is in Philadelphia.**

**C. Description of the business:**

1. This company manufactures a complete line of technical and industrial chemicals.
2. Its products are sold throughout the country from branch warehouses in several of the larger cities. These warehouses supply jobbers who deal in chemicals.
3. The main plant is in New York City and it produces both technical and industrial chemicals. There are three other plants, one of which is in Philadelphia, which produce only industrial chemicals.

**D. Outline of the transportation set-up:**

**1. Shipment of raw materials:**

The raw materials include many different kinds of crude ores from which chemicals are derived. These crude materials come from all over the world. Those originating in this country are received in carload lots by rail. Those which are imported come by water to New York and are trucked from there to the main plant.

**2. Interplant shipments: none.**

**3. Shipment of finished products:**

All shipments to the following points are made by motor truck: New York City, Philadelphia, Wilmington, Baltimore, and Washington. The company is contemplating the use of trucks for shipments to New England points.

It ships by a combination of water and rail to New England and southern points.

Shipments to all other points move by rail, the industrial chemicals in carload lots and the technical chemicals in less-than-carload lots.

It ships small quantities of very valuable chemicals by express.

**E. Miscellaneous data:**

1. The main plant has a railroad siding.
2. It uses its own motor trucks for pick-up from and delivery to the freight stations.
3. It pays the trucking charges on all shipments moving by motor truck, or the cost of the rail shipment without the local cartage charge.
4. Its production schedule is set to maintain sufficient stock to meet business conditions.
5. The technical chemicals are usually shipped in unit fiber-board



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boxes, odd lots being packed in wooden cases. The bulk chemicals are shipped in barrels and drums.

### *F. Reasons for shipping by truck:*

1. It is cheaper to ship less-than-carload lots of technical chemicals by motor truck than by rail. This results in a wider margin of profit for the company.
2. The trucker gives quicker and more direct service. The store-door delivery enables the company to make prompter deliveries on orders in the highly competitive territories of New York City and Philadelphia. This is an important factor in meeting competition, since it allows the jobbers to reduce their inventories.

### *G. Data relating to truck shipments between Philadelphia and New York City:*

1. Technical and industrial chemicals are shipped by truck to Philadelphia and New York City, and raw materials are received by truck from the Port of New York. Some industrial chemicals are trucked from the Philadelphia plant to the main plant.
2. Approximately thirty tons per day are moved by truck—finished products to New York City and raw material from the Port of New York.

Approximately fourteen tons of finished chemicals move to and from Philadelphia each day—technical and industrial chemicals from the main plant and industrial chemicals to this plant.

3. The Elihu Jones Motor Truckers and the T. M. Jackson Transportation Company, as well as other trucking companies, handle the business.
  - a. The chemical company gives its business to several truckers, so that it will not be dependent upon the facilities of any one of them. These truckers were selected because they provide reliable service at a normal rate for dependable truckers and are considered to be financially stable. The chemical company carries its own transportation insurance and thus does not depend upon the insurance carried by the trucking companies.
4. This company has been shipping by truck between New York City and Philadelphia for ten years.
5. The truckers place trucks at the company's loading platform every day. The company secures a concession in rates because it takes care of the loading and unloading of the trucks.
6. The truckers accept freight at any time, if necessary.

## INDUSTRY CASE HISTORIES

7. The ultimate consignees in New York City and Philadelphia are jobbers. The company, however, does not ship direct to them from its plants. It ships by the truckload to warehouses which it maintains in both cities. From these warehouses the products are distributed to the consignees in smaller trucks. This practice of bulk loading enables the company to obtain a low rate.
8. Rail rates for the following commodities are:
  - a. Industrial chemicals:
    - Less-than-carload lots—second class, 34 cents per cwt.
    - Carload lots—fourth class, 22.5 cents per cwt.
    - Industrial chemicals are shipped mainly in carload lots.
    - Technical chemicals:
      - Less-than-carload lots—first class, 41.5 cents per cwt.
      - Carload lots—third class, 28.5 cents per cwt.
      - Technical chemicals are shipped mainly in less-than-carload lots.
  - b. The Philadelphia local cartage rate for these products is 11.5 cents per cwt. for truckload quantities.
    - New York City local cartage rate for these products is 15 cents per cwt. for truckload quantities.
9. This company does not use containers because containers do not furnish as flexible and economical service as the motor trucks.
10. The truckers give a rate for truckload quantities which is about the same as the rail carload rate. The trucking rate is per truckload and not per cwt. This is the reason why the company consolidates into truckload lots its shipments to its warehouse in each city. It pays an additional charge for the local deliveries from the warehouses.
11. The trucking rates are by special agreement. The truckers do not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the warehouse.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

### CASE No. 8

- A. Heavy hardware.**
- B. One plant is in Philadelphia.**
- C. Description of the business:**
1. This company manufactures heavy hardware. Its products consist mainly of conductor pipe and elbows, steel windows, and steel shelving.
  2. Its products are sold widely throughout the country and to a limited extent abroad. It sells the conductor pipe to jobbers, the steel windows to building contractors, and the steel shelving to stores, railroads, and automobile supply dealers.
  3. The Philadelphia plant manufactures its entire line. The other plants in the Middle West manufacture steel windows only.
- D. Outline of the transportation set-up:**
1. *Shipment of raw materials:*  
Steel bars from Youngstown in carload lots by rail.  
Steel sheets and plates from Pittsburgh in carload lots by rail.  
Sheet copper from Baltimore in carload lots by rail.  
Oil from near-by points in tank cars.
  2. *Interplant shipments:*  
Steel windows and steel shelving from Philadelphia by rail in carload lots to the warehouse for its other plants.
  3. *Shipment of finished products:*  
Local deliveries are made with the company's own trucks.  
Shipments to New York City are very largely by motor truck, though some are by rail in carload and less-than-carload lots.  
Shipments by truck are made to Baltimore also.  
Shipment to New England points by motor truck is under consideration.  
Shipment by water to Boston, Baltimore, and Norfolk.  
Shipments to all other points move by rail in both carload and less-than-carload lots.
- E. Miscellaneous data:**
1. This plant has a railroad siding.
  2. The company owns nine trucks which are used for local deliveries and for pick-up from and delivery to the various freight stations.
  3. It pays the freight on nearly all of its shipments.
  4. It manufactures for stock and for special orders.
  5. The conductor pipe is crated for shipment, and the elbows are packed

## INDUSTRY CASE HISTORIES

in cartons. The steel windows are crated for shipment by rail and boat, and they are shipped unpacked by motor truck. The steel shelving is shipped both crated and loose, the better grades being crated.

### *F. Reasons for shipping by truck:*

1. It is cheaper to ship conductor pipe by motor truck than by rail, which is an important factor in a highly competitive price market. It is also cheaper to ship steel windows by motor truck than by rail, which gives the company a wider margin of profit. The cost of shipping steel shelving by truck is about the same as by rail.
2. Quicker and more direct service is given by truck. The overnight store-door delivery permits the jobbers to carry smaller stocks of conductor pipe products, and it allows the trucker to haul steel windows direct to the job. This eliminates storage expense and permits a more precise scheduling of erection. Prompter delivery of steel shelving can be made by truck.
3. The company considers that the loss and damage to its products when shipped by truck is considerably less than by rail. It claims that rail carriers do not use the same amount of care in handling less-than-carload packages as the trucker.

### *G. Data relating to truck shipments to New York City:*

1. Conductor pipe products, steel windows, and steel shelving are trucked to New York City.
2. Approximately 175,000 lbs. per month are being trucked under present business conditions.
3. The Benjamin Brown Trucking Corporation is the company's trucker for steel windows and shelving.
  - a. This trucker is used because he provides adequate and reliable service at a favorable rate. His financial standing and insurance were investigated. He carries insurance on each truck up to \$25,000.

Richard Roe handles the conductor pipe products exclusively.

- a. He is the only trucker who is able to handle these products without considerable damage in transit. He is familiar with the pipe business and its packing requirements. He is a small trucker with only six trucks.
4. This concern has been shipping to New York City by truck for about fifteen years, and the tendency to utilize trucks to other points is increasing.

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5. The Benjamin Brown Trucking Corporation calls every day, and Richard Roe, when notified by telephone.
6. Both truckers accept freight at any time, if necessary.
7. The consignees in this area are jobbers, building contractors, and supply dealers.
8. Rail rates for the following commodities are:
  - a. Conductor pipe products:
    - Less-than-carload lots—second class, 34 cents per cwt.
    - Carload lots—Rule 26, 23 cents per cwt.
    - Steel windows:
      - Less-than-carload lots—second class, 34 cents per cwt.
      - Carload lots—fifth class, 19.5 cents per cwt.
    - Steel shelving:
      - Less-than-carload lots—third class, 28.5 cents per cwt.
      - Carload lots—fifth class, 19.5 per cwt.
  - b. New York City local cartage rate for these products is 20 cents per cwt.
9. The company does not use containers as they cannot be used to advantage due to their inflexibility and limited size.
10. The trucking rate is about 45 cents per cwt. for less-than-truckload quantities and a special lower rate is given for truckload shipments.
11. The trucking rate is by special agreement. The truckers do not publish a tariff.
12. The truckers pick up goods at the shipper's plant and deliver them to the consignee's store door. This concern loads the trucks because it does not consider the truckers qualified to load. The truckers unload at the consignee's door.

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### CASE No. 9

**A.** Heavy hardware.

**B.** One plant in Philadelphia.

**C.** *Description of the business:*

1. This company manufactures steel filing cabinets, office furniture, and equipment.
2. The products are sold through its salesmen and dealers located in the principal cities throughout the country.
3. There is only one plant.

**D.** *Outline of the transportation set-up:*

**1.** *Shipment of raw materials:*

Sheet steel from the Youngstown district in carload lots by rail.

Baking enamel from plants in Philadelphia by truck.

Brass and bronze from Connecticut by truck.

Lumber for crating from the Pacific Coast by water.

**2.** *Interplant shipments:* none.

**3.** *Shipment of finished products:*

Steel filing cabinets and office furniture are shipped to all parts of the country.

Shipment to the Pacific Coast by water and to all other distant points by rail in either less-than-carload or carload lots. Through car service is used wherever possible.

Shipment to New York City, Atlantic City, and all other near-by points is entirely by motor truck.

**E.** *Miscellaneous data:*

1. This plant has no rail siding, so that all freight must be trucked to the railhead.
2. The company owns three trucks which are used for delivery of the finished products to freight stations and to local customers. All raw materials are hauled by outside truckers.
3. Its products are sold f.o.b. Philadelphia.
4. Its plant production is scheduled entirely to fill orders.
5. Its products are crated for rail shipment, and for truck shipment they are covered with special padded cloth bags.

**F.** *Reasons for shipping by truck:*

1. The cost of shipping is not a factor, since it is considerably more by truck to New York City than by rail and local truck delivery.
2. The trucker gives quicker and more direct service. The overnight store-door delivery to New York City permits dealers to carry smaller

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

stocks and facilitates the prompt delivery of special orders. The company claims that this factor enables it to meet the keen competition in this area.

3. The loss and damage by either truck or rail is very slight. The trucker settles immediately.
4. The trucker provides rush service for special shipments whenever necessary.
5. When shipping by rail, it is necessary for the company to crate its products. It has developed special slip covers for truck shipping which can be readily slipped over each article and used repeatedly. The use of slip covers saves labor and crating lumber.

### *G. Data relating to truck shipments to New York City:*

1. Steel filing cabinets and office furniture are trucked to New York City. There is no movement by truck from New York City to this plant.
2. Approximately 125,000 lbs. per month are being trucked to New York City under present business conditions.
3. The Robertson Trucking Company does all the plant's trucking to New York City and northern New Jersey points and occasionally performs longer hauls to other points.
  - a. This trucker was selected because he provides reliable service at about the normal rate. He is considered to be adequately insured.
  - b. The trucker runs his trucks over the road as far as Linden during the night and from there in the morning to New York City, so as to provide early morning store-door delivery.
4. This concern has been shipping to New York City by truck for twelve years.
5. It notifies the trucker in the morning as to its requirements for that day.
6. This trucker accepts freight at any time, if necessary.
7. The company sells to dealers and directly to customers on special orders.
8. The rail rate for less-than-carload lots is second class, 34 cents per cwt.; and the local delivery charge is 30 cents per cwt. in New York City. This local delivery charge in New York City compares with a 10 cent rate in Boston and a 6 cent rate in Baltimore.
9. This company does not use containers because their limited size is not adapted to its products.
10. The trucker's rate to New York City is by the piece, depending upon

## INDUSTRY CASE HISTORIES

the type of the article and the number which can be packed into one truckload. In general, the cost of shipping to New York City by truck is considerably more than by rail. The trucker's piece rates average around \$1.25 per cwt. However, these products are in general sold f.o.b., and the transportation charges to New York City as compared with the sales price are not important from a competitive standpoint.

11. The rate is by special agreement for each article manufactured. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the consignee's store door.



## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

### CASE No. 10

- A.** Floor covering products.
- B.** One plant in Philadelphia and one between Philadelphia and New York City.
- C. Description of the business:**
1. This company manufactures floor covering products.
  2. Its products are sold to jobbers, dealers, and contractors located in the principal cities of the world.
  3. The two plants in this area are operated as a unit. It owns other plants throughout the country.
- D. Outline of the transportation set-up:**
1. *Shipment of raw materials:*

Coal from the Pennsylvania coal region in carload lots by rail.

Dry felt, which is the basic raw material, from York (Pennsylvania), Niagara Falls, and Buffalo in carload lots by rail.

Dry felt from Gloucester, New Jersey, by truck. This dry felt comes in large, heavy rolls and is easily damaged by handling.

Various other raw materials all obtained in carload lots by rail.
  2. *Interplant shipments:*

The felt-treating plant is located at Philadelphia and the treated felt is shipped by truck from there to the other plant.

Finished linoleum is extensively trucked between these plants for the purpose of consolidating shipments to a single destination into carload lots in order to obtain the advantage of lower freight rates. Each of these plants manufactures certain designs, and a given order generally requires the products of both plants. This interplant movement is of considerable magnitude, 600 tons per month being trucked each way. Sixty per cent of this is hauled by the company's trucks and 40 per cent by outside truckers.
  3. *Shipment of finished products:*

All shipments, regardless of size, to New York City and to Atlantic City and other southern New Jersey points are made by truck.

Shipments to Baltimore and Washington are made by truck and water.

All other shipments are made by water, or by rail in carload or less-than-carload lots.

The company has recently been approached by a trucker for shipments to Ohio points with a promise of second morning delivery.

## INDUSTRY CASE HISTORIES

### *E. Miscellaneous data:*

1. The Philadelphia plant has sidings on two railroads, and the other plant has one siding.
2. The Philadelphia plant has a fleet of seven trucks which are used for local deliveries and for cartage to freight stations.
3. The company pays the cost of shipping to the railhead in the city in which the products are to be delivered.
4. Its production schedule is set according to general business demands.
5. The linoleum is packed for shipment in crates, and the flooring in paper-wrapped rolls.

### *F. Reasons for shipping by truck:*

1. The trucking rate has been set by the trucker to meet the cost of shipping via rail in carload lots plus the local cartage charges and the cost of bracing in box cars. Hence, cost is not a factor except for less-than-carload shipments.
2. The main item of consideration is the quicker service given by the trucker. The overnight delivery permits dealers and department stores to carry small inventories and eliminates warehousing.
3. Loss and damage of shipments is felt to be less by truck than by rail. This is particularly true of felt shipments, because there is less handling when they are sent by truck.
4. The trucker furnishes rush service whenever needed.
5. The direct contact between the company and the trucker makes it possible for shipping problems to be readily solved. The dry felt comes in large, heavy rolls and is easily damaged by handling. The difficulty of handling these rolls into and out of box cars is a factor in favor of trucking. The rolls of treated felt weigh about two tons each and can be handled by crane to and from trucks. This method of handling cannot be used with box cars.

### *G. Data relating to truck shipments to New York City:*

1. Treated felt is trucked from the Philadelphia plant to the other plant in this area, and finished products are shipped by motor truck to New York City from both plants.
2. At present, 150 tons from the Philadelphia plant and 175 tons from the other plant are shipped by truck to New York City every month.
3. The Thomas Pollock Transportation Company is the trucker handling the shipments from both of these plants.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

- a. This trucker was selected because he provides reliable service at a favorable rate and is adequately insured.
- b. He confines his service to the area between New York City and Philadelphia. He has been in business for about twelve years and now operates about forty trucks.
4. This company has been shipping by truck to New York City for about eight years, but originally used trucks for rush shipments only. For the past two years it has been shipping to New York City entirely by truck. It is considering the use of trucks for shipping to other and more distant points.
5. The trucker is notified by telephone when his services are required. He provides rush service for an entire truckload at any time at the regular rate.
6. This trucker accepts freight up to 8.00 P.M. for movement that night.
7. The consignees in this area are jobbers and contractors.
8. The rail rates from Philadelphia to New York City for linoleum and other floor covering are as follows:  
Less-than-carload lots—second class, 34 cents per cwt.  
Carload lots—fourth class, 22.5 cents per cwt.  
Local cartage charges in New York City are about 10 cents per cwt. for truckload lots.
9. This company does not use containers because their size is not adapted to the dimensions of the rolls of finished linoleum.
10. The trucking rate was set by the trucker to meet the cost of shipping via rail from the plant to the consignee's store door in carload lots.
11. The trucking rate is by special agreement. The trucker does not publish a tariff.
12. The trucker picks up the goods at the shipper's plant and delivers them to the consignee's store door.

## INDUSTRY CASE HISTORIES

### CASE NO. 11

- A. Radio sets and loud speakers.
- B. One plant in Philadelphia.
- C. *Description of the business:*
  - 1. This company manufactures high-grade radio sets and loud speakers.
  - 2. It sells its product through local dealers located in the principal cities throughout the United States and Canada.
  - 3. There is only one plant.
- D. *Outline of the transportation set-up:*
  - 1. *Shipment of raw materials:*
    - Steel from the Pittsburgh district in carload lots by rail.
    - Copper from Fort Wayne and Buffalo in carload and less-than-carload lots by rail.
    - Fiber from Baltimore and New York City in carload and less-than-carload lots by rail.
    - Corrugated boxes from various points in carload lots by rail.
    - Small fixtures and incidentals from New York City by motor truck.
  - 2. *Interplant shipments:* none.
  - 3. *Shipment of finished products:*
    - Radio sets and loud speakers are the finished products.
    - All shipments to New York City and points en route are by motor truck.
    - Occasional shipments of less-than-carload lots for rush delivery are made by motor truck to the following points: Bridgeport, New Haven, Albany, and Scranton.
    - All other shipments are by rail.
- E. *Miscellaneous data:*
  - 1. This plant has a rail siding on which all carload shipments of raw materials are received. The plant has a conveyor belt system for carrying its products outbound by rail to the near-by freight station.
  - 2. This company owns a fleet of trucks for local deliveries.
  - 3. Its products are all sold f.o.b. Philadelphia.
  - 4. Its production schedule is set according to general business conditions.
  - 5. The finished products are packed for shipment in corrugated cardboard boxes.
- F. *Reasons for shipping by truck:*
  - 1. The shipping cost is about the same as by rail in less-than-carload lots.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

2. The trucker gives quicker service. The overnight delivery permits dealers to reduce their inventories and eliminates the necessity of a warehouse.
  3. The use of trucks eliminates local handling and cartage and the necessity of arranging for this service.
  4. The company is able to obtain rush service for immediate deliveries for which it pays a higher rate.
  5. Loss and damage of shipments by truck is claimed to be less than by rail. Claims are settled at once by the trucker.
- G. *Data relating to truck shipments between New York and Philadelphia:*
1. Radio sets, loud speakers, and advertising matter are trucked to New York City. Paint and small hardware are trucked from New York City.
  2. 180,000 to 200,000 lbs. per month are shipped to the New York City area, 80,000 lbs. of which are for Newark and Jersey City. 150,000 lbs. per month are shipped from New York City to the plant.
  3. The Interallied Trucking Corporation is the trucker.
    - a. An investigation was made of the financial standing of this trucker and he was found to be well established and adequately insured. The rates of this trucker are somewhat higher than those of some of the other truckers, but because of the above factors he was chosen.
    - b. This trucker has eighteen road trucks and five local delivery trucks for service between New York and Philadelphia.
  4. The company has been using trucks in this service for the past eight years. Trucks are used for shipping to other points when specified by the consignee.
  5. The trucker is notified by telephone when his services are required.
  6. Overnight delivery is the general practice, but the trucker will accept freight at any hour.
  7. This company has three distributors in New York City, one in Newark, and one in Trenton.
  8. The rail rates for this shipper's products are:  
Carload lots—third class, 28.5 cents per cwt.  
Less-than-carload lots—first class, 41.5 cents per cwt.  
The New York City local cartage rate is 20 cents per cwt. plus warehouse charges if storage is necessary.
  9. This company does not ship by containers as it is not able to obtain the quick and flexible service from them afforded by motor trucks.

## INDUSTRY CASE HISTORIES

10. The trucking rate is 62 cents per cwt.
11. The trucking rate is by special agreement. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the consignee's store door.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

CASE No. 12

**A.** Confectionery.

**B.** One plant in Philadelphia.

**C.** *Description of the business:*

1. This company manufactures a high grade of confectionery and specializes in hard candy.
2. Its products are sold throughout this country and to some extent abroad. It sells in bulk lots, about 25 per cent of its output going to dealers and the other 75 per cent to chain stores.
3. It has only one plant.

**D.** *Outline of the transportation set-up:*

**1.** *Shipment of raw materials:*

Corn syrup and starch from Iowa in carload lots by rail.

Sugar and corrugated cardboard from Philadelphia by truck.

Soft coal from the Pennsylvania coal regions in carload lots by rail.

Wood for packing-cases from North Carolina in carload lots by rail.

Tin containers from Lancaster, glass jars from Bridgeton, New Jersey, and wax wrapping paper from New York City are received by motor truck.

**2.** *Interplant shipments:* none.

**3.** *Shipment of finished products:*

A wide variety of hard candies is shipped to various points throughout the country.

Shipments to Trenton, Newark, Jersey City, New Haven, and all points in New York City below 125th Street go by truck. The trucking rates to points above 125th Street are appreciably higher. Traffic to Providence and Boston goes by water.

All other shipments move in less-than-carload lots by rail.

**E.** *Miscellaneous data:*

1. This plant has one railroad siding and shipments via other railroads are trucked to the various freight stations in Philadelphia.
2. This company has a fleet of five trucks which are used for local delivery and cartage to and from freight stations.
3. Its products are sold with shipping charges prepaid or f.o.b. Philadelphia, depending upon the consignee.
4. It manufactures for stock, and to order for its larger, near-by customers.
5. Its products are packed for shipment in tin pails, cardboard cartons, wooden barrels, and cases for movement by truck or rail.

## INDUSTRY CASE HISTORIES

### *F. Reasons for shipping by truck:*

1. The reduction in the total shipping time from plant to store door is one of the important reasons for shipping by truck. This allows smaller inventories to be carried by those customers located in the trucking area. The company manufactures to order for all local customers, and the overnight delivery to store door by truck has placed New York in the same class as Philadelphia in this respect.
2. The damage to products in shipping is definitely less by truck than by rail. The hard candy is usually packed in small glass jars. It is highly glossed and some of it has sharp corners. If this gloss is destroyed or the corners chipped due to excessive vibration or rough handling, the sales value of the product is seriously diminished. The trucker settles all claims immediately. This is faster than settlement by the railroads, in spite of the very prompt treatment which most railroads now give to the matter.
3. Due to direct contact with the trucker and to the interest which the trucker takes in the company's shipping problem, damage to its products has been practically eliminated. The company had been unable to accomplish this in shipping by rail in less-than-carload lots in spite of improved methods in packing.

The railroads are thought not to be considerate enough of the small shipper. Often he can obtain no satisfaction from them in answer to requests, whereas the truckers give complete satisfaction.

### *G. Data relating to truck shipments to New York City:*

1. Hard candies are shipped by truck to New York City. Wax wrapping paper is trucked from New York City to the plant.
2. At present about 125,000 lbs. are being shipped by truck each month to New York City.
3. This company gives its business to the J. W. Plotkin Trucking Company and to the Benjamin Brown Trucking Company. The former is its own selection, while the latter is preferred by one of the large chain stores.
  - a. Both of these truckers are considered to be in sound financial condition and to be adequately insured. They were selected for reliability, not because they offer the lowest rate. Both of these truckers charge the same rate and give equivalent service.
4. This company has been shipping to New York City by truck for about six years.
5. The truckers call every day between 4.00 and 6.00 P.M., but are



## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

- available at any time for rush service. This company makes shipments to New York City every day.
6. The truckers accept freight at any time, if necessary.
  7. Shipments are made to dealers and chain stores throughout the metropolitan area.
  8. The rail rates for this company's products are as follows:  
Less-than-carload lots—second class, 34 cents per cwt.  
Carload lots—third class, 28.5 cents per cwt.  
The New York City local cartage rate is 10 cents per cwt. for points below 48th Street.
  9. This company does not use containers, because container service does not afford it the important shipping features of motor truck service.
  10. The trucking rate is 50 cents per cwt.
  11. The trucking rate is by special agreement. The truckers do not publish a tariff.
  12. The truckers pick up and deliver goods at the shipper's and consignee's store door.

## INDUSTRY CASE HISTORIES

### CASE No. 13

- A.** Cracker and cake products.
- B.** One plant in Philadelphia and one in New York City.
- C. Description of the business:**
1. This company manufactures baked goods, crackers, and cakes and sells them in bulk and packages.
  2. The Philadelphia plant is one of the district branches of the company and supplies sixteen district agencies located within a 150-mile radius of Philadelphia.
  3. This company has district manufacturing branches throughout the country, each with its own shipping branch which supplies the agencies within its own territory. These district agencies in turn distribute to the retail stores in their districts.
- D. Outline of the transportation set-up:**
1. *Shipment of raw materials:*  
Butter, eggs, and flour in carload lots by rail from the various producing centers of the country.  
Coal from Pennsylvania coal regions in carload lots by rail.
  2. *Interplant shipments:*  
The New York City and Philadelphia plants are supplementary to each other, each manufacturing a portion of the line of products. Thus each shipping branch ships to the other branch to complete the line of products at that plant for distribution to its district agencies. This interplant movement is entirely by motor truck.
  3. *Shipment of finished products:*  
All shipments to the near-by agencies around Philadelphia are by motor truck. Shipments to the agency in Atlantic City are also by truck, as this agency has no rail siding.  
All other shipments are made in carload lots by rail.
- E. Miscellaneous data:**
1. The Philadelphia shipping branch has a railroad siding.
  2. This branch has no trucks of its own. All truck shipments to the agencies and to the New York City shipping branch are carried by outside truckers.
  3. The products are sold f.o.b. plant to the agencies.
  4. This plant manufactures almost entirely to order. This is necessary because of the perishable nature of the product. The district agencies each carry a certain inventory and order weekly in bulk lots to replenish their supply.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

5. The products are shipped in cardboard containers and paper packages.

### *F. Reasons for shipping by truck:*

1. Truckers give quicker and more direct service. The overnight store-door delivery permits the company to manufacture to order and deliver to the New York shipping branch and the Atlantic City agency in a minimum of time. Both these consignees have no direct rail connection. Hence, truck shipment is necessary, even though all shipments are in carload lots.
2. Shipment by truck eliminates rehandling. This is an important consideration because of the fragile nature of the products.
3. Other things being equal, the company prefers to ship via rail. It can pack freight cars more easily than trucks, because in the use of freight cars it is not necessary to prevent shifting of lading and consequent damage to the products.

### *G. Data relating to truck shipments to New York City:*

1. Crackers and cakes in bulk and packages are trucked to and from New York City.
2. Approximately 320,000 lbs. per month are being trucked in each direction under present business conditions.
3. The Williams Motor Freight Company and the Nettleton Transportation Company are the truckers for this plant.
  - a. The company has used these truckers for years and continues to do so because of their reliability. Both truckers have furnished a statement from their brokers as to the adequacy of their insurance.
4. The company has been shipping by truck between the New York and Philadelphia shipping branches for many years.
5. It informs the truckers one day in advance of its shipping requirements for the following day.
6. It ships entirely in truckload quantities, so that the truckers are always willing to hold a truck for them.
7. The shipping of this company between New York City and Philadelphia is entirely between the two shipping branches.
8. The rail rate for crackers and cake in carload lots is fourth class, 22.5 cents per cwt.

No data are available on New York City or Philadelphia local cartage rates for the company's products.
9. The company does not use containers.

## INDUSTRY CASE HISTORIES

10. The trucking rate is considered confidential. It is stated to be about the same as the rail rate plus a nominal local cartage charge.
11. The trucking rate is by special agreement. The truckers do not publish a tariff.
12. The truckers receive goods at one plant and deliver them to the door of the other plant.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

### CASE No. 14

#### **A. Paint.**

#### **B. Two plants in Greater New York.**

#### **C. Description of the business:**

1. This company manufactures paint, varnish, and calcimine. It trades largely in shelf goods, five-gallon cans and smaller, which are used by painters and householders.
2. Its plants in Greater New York supply the eastern section of the country and the Pacific Coast. It sells only to jobbers and distributing dealers.
3. It has two plants in Greater New York and a warehouse in New York City proper which is used for local distribution. One of the plants manufactures paint only, and the other plant varnish and calcimine. Four other plants are located in large cities in various parts of the country.

#### **D. Outline of the transportation set-up:**

##### **1. Shipment of raw materials:**

Linseed oil from various eastern points in tank cars.  
Lead from various points in the East in carload lots by rail.  
Zinc from eastern Pennsylvania in carload lots by rail.  
China wood oil from China by water.  
Fuel oil from local sources in tank cars.

##### **2. Interplant shipments:**

Finished products are shipped from the two plants to the New York City warehouse by motor trucks.  
Varnish is shipped from one of the plants to the other by both motor truck and tank cars. This plant uses the varnish for the manufacture of paint.

##### **3. Shipment of finished products:**

Local deliveries are made with its own trucks.  
It ships to Philadelphia and to points between New York and New Haven entirely by motor truck.  
Shipments to Chicago and the Great Lakes ports move by rail and water.  
Shipments to all other points move by rail in carload and less-than-carload lots.

#### **E. Miscellaneous data:**

1. Both plants in Greater New York have rail sidings.
2. The company has five trucks of its own which are used for local de-

## INDUSTRY CASE HISTORIES

liveries and for pick-up from and delivery to the various freight stations.

3. It sells f.o.b. plant. Distributors get carload rail freight allowance when buying in carload lots.
4. Its production schedule is set according to business conditions to maintain the necessary stock.
5. Its products are sold in cans. The five-gallon cans are shipped as such, and the smaller cans are packed in cases.

### *F. Reasons for shipping by truck:*

1. Cost is not a factor. It is more expensive to ship the products to Philadelphia by motor truck than by rail.
2. The trucker gives quicker and more direct service. The overnight store-door delivery permits the company to deliver orders the following morning in Philadelphia, thus allowing distributors to carry small inventories. This makes effective competition possible with the Philadelphia paint concerns.
3. Loss and damage to the products is negligible in all means of shipping.

### *G. Data relating to truck shipments to Philadelphia:*

1. Paint, varnish, and calcimine are shipped by motor truck to Philadelphia.
2. Approximately 100,000 lbs. per month are being trucked to this area under present business conditions.
3. The J. W. Plotkin Trucking Corporation is the trucker performing this service.
  - a. This trucker is used because he provides adequate and reliable service at the normal rate for a dependable trucker. His insurance and financial standing were investigated.
4. This company has been shipping to Philadelphia by motor truck for about six years.
5. The trucker calls at the paint manufacturing plant and the New York warehouse every day. Goods for Philadelphia from the other plant are first trucked to the paint manufacturing plant.
6. The trucker accepts freight at any hour, if necessary.
7. The consignees in this territory are distributing jobbers.
8. Rail rates for the following commodities are:  
Paint and varnish:  
Less-than-carload lots—third class, 22.5 cents per cwt.  
Carload lots—fifth class, 19.5 cents per cwt.

## SHIPPING BETWEEN NEW YORK AND PHILADELPHIA

Calcimine:

Less-than-carload lots—fourth class, 22.5 cents per cwt.

Carload lots—fifth class, 19.5 cents per cwt.

The Philadelphia local cartage rate for these products is 15 cents per cwt. The local haulage from the two plants to the New York City warehouse costs 15 cents per cwt. in outside trucks and about 25 cents per cwt. in the company's trucks.

9. The company does not use containers because they do not furnish the flexible service that motor trucks afford.
10. The trucking rate to Philadelphia is 50 cents per cwt.
11. The trucking rate is by special agreement. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the consignee's store door.

## INDUSTRY CASE HISTORIES

### CASE NO. 15

#### A. Cigars.

B. Several plants located near Philadelphia.

#### C. *Description of the business:*

1. This company manufactures a complete line of cigars of various grades.
2. It sells its products throughout the country through jobbers located in the principal cities.
3. This concern has twelve plants scattered throughout Pennsylvania and one plant in New York State.

#### D. *Outline of the transportation set-up:*

##### 1. *Shipment of raw materials:*

Tobacco received from Florida in carload lots by rail and from Connecticut largely by motor truck from Hartford. This raw tobacco from Hartford formerly moved in carload lots by rail.

Cigar boxes and packing containers from a local source by truck.

Cellophane from Tennessee in less-than-carload lots by rail.

Coal from the Pennsylvania coal regions in carload lots by rail.

##### 2. *Interplant shipments:*

A large volume of finished products is shipped between plants by motor truck for the purpose of consolidating into carload lots shipments moving to the same destination. Each plant in a given area manufactures only a portion of the complete line so that generally orders have to be filled from more than one plant.

##### 3. *Shipment of finished products:*

Local deliveries are made with the company's motor trucks.

Its shipments to New York City are entirely by motor truck, and a portion of the shipments to Baltimore, Washington, and New England points as far as Hartford move by motor truck.

Shipments to southern points move via Norfolk by rail and water, and shipments to other Atlantic Coast ports move by water alone.

Shipments to all other points move by rail in carload and less-than-carload lots, mainly the latter. The less-than-carload shipments are made by through package car service wherever possible.

#### E. *Miscellaneous data:*

1. Only one of the Philadelphia plants has a rail siding.
2. The company operates two trucks of its own in the Philadelphia area for local deliveries and for service to the freight station. It operates these two trucks merely as a matter of convenience and uses outside



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truckers for the bulk of the local work as it is considerably cheaper to do this.

3. It pays the cost of all shipments except the local delivery charges when the shipment is via rail.
4. Its production schedule is set according to general business demands to maintain the requisite amount of stock.
5. Its cigars are packed for shipment in either cartons or wooden cases.

### *F. Reasons for shipping by truck:*

1. Cost is not considered a factor. The cost by truck is slightly less than the cost by rail in less-than-carload lots plus local cartage charges. However, in all cases, the consignee pays the local cartage charge at his end.
2. The trucker gives quicker and more direct service. The store-door overnight delivery allows the company to make prompt deliveries, thereby enabling its jobbers to carry smaller stocks. This is an important factor in meeting competition. The direct service is an important convenience factor as it eliminates the necessity of arrangement for local cartage and of the billing and accounting connected with it.
3. Loss and damage to these products in shipping is slight with any type of transportation.

### *G. Data relating to truck shipments to New York City:*

1. Cigars are shipped by motor truck to New York City and tobacco leaf is shipped from Hartford via New York City to the plants in Philadelphia.
2. Approximately 300,00 lbs. of cigars per month are trucked to New York City under present business conditions. Approximately 200,000 lbs. of tobacco leaf per month are received by truck from New England.
3. The Burnett Trucking Company is the trucker who hauls nearly all of the company's truck shipments to New York City and points beyond and the raw tobacco leaf from Hartford.
  - a. This trucker is used because he is familiar with the tobacco business and provides reliable service at reasonable rates. The company does not depend upon the insurance carried by the trucker, but carries its own insurance to protect all its goods in truck transportation. It considers this necessary because of the relatively high value of a truckload of cigars.

## INDUSTRY CASE HISTORIES

4. This company has been shipping by motor truck extensively for the past five years.
5. The trucker calls at each of the plants every day, and any special arrangements are made by telephone.
6. The trucker accepts freight at any time, if necessary.
7. The consignees in New York City are mainly tobacco jobbers.
8. The rail rates for these goods are as follows:  
Cigars:  
Less-than-carload lots—first class, 41.5 cents per cwt.  
Carload lots—second class, 34 cents per cwt.  
Raw tobacco in bales:  
Less-than-carload lots—first class, 41.5 cents per cwt.  
Carload lots—fourth class, 22.5 cents per cwt.  
If the raw tobacco is cased, it moves fourth class in both less-than-carload and carload lots. However, raw tobacco is shipped mainly in carload lots, hence the company does not case it for rail movement. It is not necessary to case it for truck movement.  
Local cartage charges in New York City for cigars in cartons or wooden cases is about 10 cents per cwt. for truckload quantities.
9. This company uses containers for shipping between Philadelphia and Baltimore, Pittsburgh, and Cleveland, because it is cheaper. The forwarding companies will not accept less-than-carload lots of cigars for shipment because the difference between the carload and less-than-carload rail rates on cigars is too small to enable the forwarders to make a profit.
10. The trucking rates for both cigars and raw tobacco leaf are figured per carton, case, or bale. The trucking rate between Philadelphia and New York is about 50 cents per cwt. for cigars in 80 lb. cartons and about 38 cents per cwt. for cigars in large wooden cases.  
The trucking rate for tobacco leaf in bales is about 35 cents per cwt. between New York and Philadelphia.
11. The trucking rate is by special agreement. The trucker does not publish a tariff.
12. The trucker picks up goods at the shipper's plant and delivers them to the consignee's store door.

## APPENDIX III. RATE DATA

### I. RAILROAD CLASS RATES—NEW YORK CITY TO PHILADELPHIA

<i>Class</i>	<i>Rate per cwt.</i>
First . . . . .	41.5 cents
Second . . . . .	34.0 cents
Third . . . . .	28.5 cents
Fourth . . . . .	22.5 cents
Fifth . . . . .	19.5 cents
Sixth . . . . .	18.5 cents
Rule 25 . . . . .	29.0 cents
Rule 26 . . . . .	23.0 cents

NOTE: This class rate schedule applies to both carload and less-than-carload quantities. A given commodity in a certain class for carload shipments is in a higher class for less-than-carload shipments.

### 2. PENNSYLVANIA RAILROAD CONTAINER RATE SCHEDULE

Minimum charge per container:

New York City to Philadelphia . . . . .	\$ 8.25
South Kearny to Philadelphia . . . . .	8.25
New York City to Baltimore . . . . .	10.25
South Kearny to Baltimore . . . . .	10.25

New York City to Philadelphia is 99 rail miles.

Basis of container rates:

The rate is 5 cents per mile per container for 4,000 lbs. or less. For each additional 500 lbs. or fraction thereof,  $\frac{1}{4}$  cent per mile is added.

### 3. EXPRESS RATES—NEW YORK CITY TO PHILADELPHIA

Edible products . . . . .	\$1.09 per cwt.
Non-edible products . . . . .	1.45 per cwt.