

SOME WAYS
OF
REDUCING FREIGHT CHARGES

ONE OF A SERIES OF TREATISES IN AN INTERSTATE
COMMERCE AND RAILWAY TRAFFIC COURSE

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(Non-Resident Instruction)

CHICAGO

INTERSTATE COMMERCE AND RAILWAY TRAFFIC COURSE

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The subjects listed below constitute the basic material of a course in Interstate Commerce and Railway Traffic. This course is especially designed to meet the constantly growing demand for efficiently trained men in railroad and industrial traffic work; to assist students to pass the examinations for government service under the Interstate Commerce Commission; and to meet the demand for men competent to direct the work of commercial organizations and traffic bureaus. With the exception of the Atlas of Railway Traffic Maps, the subjects listed below are covered in an average of approximately 200 pages each.

Atlas of Railway Traffic Maps
Traffic Glossary
Freight Classification; Some Ways of Reducing Freight Charges
Freight Rates: Western Territory; Bases for Freight Charges
Freight Rates: Official Classification Territory and Eastern Canada; Industrial Traffic Department
Freight Rates: Southern Territory
Publication and Filing of Tariffs
Freight Claims; Investigation of Freight Claims; Routing Freight Shipments; The Bill of Lading; A Primary Lesson in Transit; Demurrage
Railway Organization; Statistics of Freight Traffic; Railway Accounting
Express and Parcel Post
Ocean Traffic and Trade
Railway Regulation
The Act to Regulate Commerce and Supplemental Acts
Conference Rulings; Procedure Before the Interstate Commerce Commission; Grounds of Proof in Rate Cases
Application of Tariffs
The Law of Carriers of Goods
Practical Traffic Problems

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(Home Study Under Expert Guidance)
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SOME WAYS OF REDUCING FREIGHT CHARGES

INTRODUCTION

While the Interstate Commerce Commission has repeatedly said that freight rates must be the same to all shippers, and while legislatures, both state and national, have passed laws prohibiting unjust discrimination in freight rates, the time will never come when some shippers do not have a portion of their freight shipments carried at lower charges than those of their competitors. This is so because of the complicated conditions under which freight traffic is handled and the great diversity not only of commodities, but of methods of packing and describing these commodities. Because of these complications, there are few if any fields which offer better opportunity for keenness of insight, clear thinking, thoroughness, and alertness than that of the rate expert. It is the purpose of this treatise to call attention to conditions which affect freight charges and whereby it is possible to reduce these charges to a minimum. The subject will be discussed under four general headings as follows: (a) packing freight, (b) description and classification of freight, (c) weights, and (d) miscellaneous ways of reducing freight charges.

CHAPTER I

PACKING FREIGHT

Packing goods for transportation¹ is of as great importance as the production of them, for what are they worth at the place of production if they cannot be shipped to the consumer and be received in perfect condition? Besides, the cost of packing and of transportation is an item which does not enter into the intrinsic value of the goods, and, therefore, reduction in these two items of cost will not detract from their selling value.

In packing freight for shipment, four distinct points should be considered: (a) What style of packing will secure the lowest classification? (b) What is the minimum amount of tare or dead weight possible in every package? (c) What packing material and what style of package will give full protection to the goods and yet be the least expensive? (d) How can the goods be packed so as to insure perfect condition when delivered?

While the last two points do not come directly under the subject which is being considered they are so closely related to it that it would be unwise to omit them entirely. As will be seen later, it would not be right to emphasize the fact that the tare weight of a shipment should be reduced to a minimum without strongly bringing out in connection therewith the fourth point, namely, the safe

¹ The treatise on "Freight Classification," which constitutes a part of this course, may well be studied in conjunction with this treatise.

transportation of the goods. The last two points will be disposed of briefly, but this must not be taken as any indication of their unimportance.

1. COST OF PACKAGE

Any money put into a package that does not add to the safe carriage of the goods contained therein nor add to the attractiveness of the shipment and thereby serve as advertisement is thrown away. If this expense can be reduced, just that much more can be put into the product itself, the price reduced, or the profits increased. The railroads recognize this fact and have made special provisions to enable shippers to reduce to a minimum the cost of packing. With this in view, extremely low rates are often allowed on what are known as "carriers" when these are returned to be refilled or used a second time. Such carriers are barrels, casks, carboys, bags, egg cases, butter tubs, and other articles too numerous to mention.

When the depreciation in the value of the carrier on each trip is not as great as the cost of returning it, a saving can be brought about by its return. Sometimes it is cheaper to make a substantial container and have it returned, while at other times it is better to make a cheaper one and not have it returned. This depends upon so many conditions that each case must be considered by itself. An illustration, however, might well be cited. It is cheaper in most cases to pack castings in sacks rather than in barrels, because the sacks can usually be returned as far as 200 miles or more for less than one cent each and a strong sack can be used several times. A barrel cannot be returned to advantage and, even if it could be, is hardly strong enough to stand more than one trip.

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Different styles of containers vary in cost. A box, both as to material and labor, is more expensive than a crate. Whenever, therefore, the rate is the same, always use a crate, unless there are good reasons to the contrary. The crate may also be constructed in different ways so that one which requires less lumber may be even more substantial than one of a heavier type. Thus, one with lock corners is stronger than one without, while diagonal cross strips make more solid bracing than strips nailed straight across or lengthwise. It is not necessary to say anything further here in regard to this phase of packing freight. The cost of packing and of the container is a point closely related to the cost of manufacture, and the problems involved are less technical than some of the others that need to be taken up here.

2. SAFETY OF GOODS

The most essential consideration in packing freight for shipment is the safety of the product. If the goods are received in a damaged condition the very object of their transportation is defeated. One can, as a rule, collect from railroad companies for damage suffered in transit; but often prompt and safe delivery is the most important service factor from the customer's standpoint, and the failure to receive the shipment on time and in good order antagonizes him. Neither is it fair to the carrier to pack goods so that even somewhat rough handling will damage them. Every employer knows how *difficult it is to secure efficient help*. This is particularly true of railroad companies where the help is scattered out over thousands of miles of road, making supervision or a check on negligence extremely difficult.

Aside from the consideration which is due the carriers,

the shipper, so far as it is in his power, should see to it that the goods reach their destination in perfect condition. There may be far-reaching losses due to the arrival of shipments in a damaged condition, losses which often cannot be determined and sometimes are not apparent though just as real as if they could be determined exactly. A single illustration will show how such losses work out.

About the middle of May, two Illinois farmers ordered corn planters from an implement dealer at S———. The latter wired the orders in, but because of the early spring the factory could not ship immediately. In fact, it was a week later when the planters arrived at S———, one in a damaged condition. Both farmers were on hand when the planters came, but only one, of course, could get a planter. The best the dealer could do was to let the man who had ordered first have the perfect machine and promise the other customer to telegraph for a new part to replace the broken one. This, however, would be three days in coming. The delay was not at all satisfactory to the second buyer; so he cancelled his order and bought a planter of another make from a competing dealer. Nor was this all. He was so well treated by the competing dealer that he gradually became one of that store's regular customers. The loss was not merely a broken casting or the loss of profit on one sale, but the loss of a good customer.

That there is a current tendency toward more and more flimsy packing can hardly be denied. Because of the more rapid transportation and the increasing tonnage that must be handled at large centers, the opposite should be true. Rough handling is to some extent unavoidable, and allowances must always be made for shift-

ing of goods in cars while in transit, and especially when switched in the yards. The miscellaneous collection of articles which makes up the ordinary run of less-than-carload shipments usually cannot be packed so solidly as a straight carload of one commodity.

In packing less-than-carload freight, therefore, the fact that it may be loaded into a car with almost anything else should be borne in mind. Goods may be injured by contact with others in the same car. On the other hand, while there may be little danger of damage to certain classes of freight by other articles, this freight may be of such a nature as to inflict damage upon the goods packed with it. In these cases, it seems only fair that such goods should be packed so as to inflict the least possible damage upon other products.

The above should be sufficient to impress upon the reader the fact that in packing goods for shipment it is important to bear in mind the cost of the package and the safety of the articles packed. If these are not kept in mind there may be some apparent reduction in the freight charges, but it may be only apparent. The other two points to be considered in packing freight for shipment and the only ones that have a direct bearing upon the subject under consideration can now be taken up.

3. WHAT STYLE OF PACKING WILL SECURE THE LOWEST CLASSIFICATION?

To determine the style of packing necessary to obtain the lowest freight rate, secure a copy of the classification governing in the territory within which the shipment is to be made, and *study it carefully*.² Become thoroughly familiar with the different methods of packing

²For brief description of different classification territories, see the section on Describing and Classifying Freight in this treatise.

to which the article in question is subject and the class which applies to each. In studying the classification do not forget the rules which are printed at the beginning thereof.³ Expensive errors are regular occurrences because many shippers do not study the classifications. Some things to be guarded against are mentioned in the following pages. These will suggest others.

(a) Different Kinds of Packages

In general, goods which can be packed in boxes or barrels take the same rate when packed either way. If in crates, they are often one class higher than if in boxes or barrels; if in sacks or bundles, they are often still another class higher. By bags is understood those made of material other than paper, which usually take one class still higher. For example, in the Western Classification corn meal in paper sacks takes third, while in cloth sacks it takes fourth class.

One reason for these differences, and probably the main one, is that these varying packages provide varying amounts of protection to the goods. By making different classifications for different styles of packages, carriers shift the responsibility for good packing on the shippers, where it really belongs. Goods not subject to damage may take the same rate in whatever form shipped. As a case in point, iron or steel castings, in the Official Classification, take the same rate whether in boxes, barrels, sacks, bundles, or loose if they weigh over fifteen pounds each.

There are, however, many exceptions to the rule; in

³ For comparison of rules of Western, Southern, and Official classifications, see the treatise on "Freight Classification."

fact, cases are found where the conditions are reversed. These exceptions make it necessary for each shipper or traffic manager to study his classification carefully. Failure to do so may duplicate the experience of a Southern charcoal shipper. Located in a little out-of-the-way town, he shipped a considerable amount of his product to several different and distant buyers. He made his shipments in a container of any style which happened to be at hand—boxes, gunny sacks, or barrels—until in one shipment he happened to use all three styles of packages. When the charcoal was received at the destination, he discovered from his freight bill that three different rates had been charged. The investigation that followed showed that the Southern Classification provides that charcoal in boxes shall be rated at first class, in sacks at third, and in barrels at fifth.

Other illustrations from the same classification may be quoted. Shelled pop-corn in boxes takes fourth class, while in sacks it takes fifth. Under the provisions of one classification, woolen sweepings take second class in bags, and sixth class in bales, although the two kinds of packages would not seem to warrant such a difference. Remember that the unexpected and possibly unexplainable may happen in the case in which you are interested. It actually does happen very often in the transportation of freight.

Goods should, therefore, not be boxed if they travel more cheaply in barrels or kegs, nor should grate bars be shipped loose at first class when if wired into bundles only third class will be charged.

Complaint was made before the Interstate Commerce Commission some time ago by a Wisconsin soap manufacturer because when tallow was received in barrels with cloth tops, it was charged at third class, while if

the tops had been of wood, the fourth class rate would have been charged. After a careful study of the facts, the Commission held that such a discrimination in rates was not unreasonable because the cloth tops are more apt to come off than are those of wood. Consequently, the carriers assume greater risk in transporting the former because of the greater liability of loss as well as damages to other goods with which the tallow might happen to be loaded. This emphasizes a point which shippers should consider thoroughly in preparing freight for shipment. It is a small matter to put a wooden top in a barrel instead of covering it with some kind of cloth, but the difference in freight charges may prove to be considerable.

This holds true not only in the transportation of tallow. In the Western Classification glass bottles when in barrels with wooden tops take third class; with gunny sack tops, second; while with cleated tops or entirely without tops, first class. Fresh apples in the same classification are third class when in barrels with wooden heads, but first when cloth tops are used.

On the other hand, there are instances when a filled barrel without a top takes the same rate as when with a wooden head. In the Southern Classification, building or fire brick takes the same rate either way, and the cost of the top and the expense of putting it in can be saved.

It might be well to suggest just here that the reader must remember that freight classifications are continually being changed and if he should compare statements found in this treatise with later classifications and find discrepancies, he must not charge the writer with carelessness or errors. The cases cited were taken from classifications in force at the time this material was collected

and might easily be changed during the life of a book of this kind. This, however, does not impair the value of the treatise as it is not the intention merely to impart specific facts, but to show the method of procedure and the care necessary in packing freight so as to reduce the freight charges to a minimum. This also holds true to a greater or less degree with regard to the entire discussion, as conditions in the traffic world are never the same in all matters from one year to another.

(b) *Bulk*

One of the elements that determine the class to which a commodity belongs is its density or bulk from the carrier's point of view, the space in a car which a given weight of the commodity will occupy. In a large number of cases this amount of space is determined by the way in which the goods are put up for shipment. The shipper, in other words, determines to a marked extent how much weight can be loaded into a car. If his goods are so packed that a given weight requires a large space, they properly take a higher rate than when packed in a form that requires a smaller space for the same weight. Where it is in the power of the shipper to reduce the volume per unit of weight, it is just as proper that the railroads should discriminate in favor of the less bulky form.

One of the most common distinctions made along this line is the difference between goods that are set up (S. U.) and those knocked down (K. D.). In the Western Classification, for instance, most agricultural implements are one and one-half times first class when S. U., but only third when K. D. According to the Southern Classi-

fication, lounges take one and one-half times first class, S. U., and first class when backs are unscrewed and packed individually.

A western manufacturer of machinery was in the habit of shipping shafting with couplings, pulleys, and hangers attached and was regularly assessed the first class rate on the entire shipment. Had he been familiar with the classification, the hangers and pulleys would have been taken off, and the shafting either with or without couplers would have been carried at fourth class. The hangers, if loose and weighing over one hundred pounds each, or if boxed, would have taken fourth class. The pulleys under the same conditions would have taken second class. The Official and Southern classifications also make distinctions in the rates on these articles when shipped separately or attached.

Compression is another method by which bulk may be reduced. Thus, ground or granulated cork when uncompressed takes first class in the Southern Classification. If it is machine compressed, however, it takes third class. In Western Classification Territory, feathers which take two and a half times first class when uncompressed, are required to pay only one and one-half times first when compressed.

Still another method of securing a lower and cheaper classification is by "nesting." The Western Classification defines this as meaning two or more like articles fitted one within another, while the Southern requires that there be a series of at least three. Articles may be nested solid or only partly nested. In the Southern Classification "wood splint baskets" with tops and handles removed and nested are rated as second class; with tops and handles attached and nested they must pay

first class. Four baskets with ends placed within one another take one and one-half times first class. Packed in any other form not specified they are taxed double first-class rate.

These methods of reducing bulk are only suggestions to indicate what can be done with light-weight products. Every shipper must study the classification for his particular line to see what saving can be made. Proper packing is one of the simplest and most effective ways of reducing freight charges.

On account of the greater difficulty of loading and unloading very large packages, as well as for other reasons, differences in classifications are sometimes based upon the size of the package. Those above a standard size are assessed a higher rate than those having less than the standard dimensions. Thus, passenger vehicles, crated, in the Southern Classification take first class when the crate is under thirty-four inches in height, one and one-half times first if the crate is above thirty-four and less than fifty-four inches high, and double first if exceeding fifty-four inches. In the Official Classification, the dimensions as to the length of the crate are also prescribed. With a little care, it is often possible to vary either the height or length of a crate so as to make it eligible for a lower rating.

(c) *Risk*

The amount of risk which the carriers take in transporting freight is an element which determines the class to which any particular commodity shall belong and different rates are provided for different methods of packing according to the protection that is given the goods packed. Some articles have caused carriers so much

trouble and expense through an unreasonable number of loss and damage claims that it has become necessary for the different classification committees to work out regular specifications for the boxing, crating, or other packing of these articles.

The specifications for crating furniture in the Western and the Southern classifications are similar in their requirements. They provide for lock corners, specify the size of the strips which may be used in crating, varying for soft and hard wood, the thickness of covering for finished surfaces, and the portion of the front, sides, back, and bottom of the article which must be covered. When furniture is wrapped, burlap not less than a specified weight must be used, and a minimum amount of excelsior or its equivalent is required. If any detail of these specifications is not complied with, the package is penalized by charging a rate one class higher than it would be otherwise. There are also specifications for crating passenger vehicles which are fully as minute and as rigorous as those for furniture. Here again the penalty of non-conformity is a rate one class higher.

Illustrations might be multiplied. In the Southern Classification, oranges in cases with iron straps encircling the box are second class, but if one of these straps is left off, first class is charged. In the Western, mineral water in carboys is first class, but if the necks are protected on all sides by a wooden or metal hood, third class applies. In both of these cases the extra requirement to secure the lower rating is slight and is easily and inexpensively satisfied when the shipper is aware of the provision. At the same time, the reason for the lower rate is plain; this protection for the neck of the carboy safeguards the container and insures the railroad against

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breakage, and so justifies the considerable difference in rate. All important classifications have many such provisions for different rates based upon specifications increasing the safety of the goods carried. Some of these special provisions are to be found in the body of the classification where the article itself is listed, while others must be dug out of the rule which prefaces each classification.

Of late years, boxes of pulp board, fibre, or double corrugated water-proofed board have been substituted to a notable extent for wooden boxes. These are rated like similar packages of wood, if they comply with given specifications as to thickness of the material used and the resistance per square inch to crushing strains; this latter depending, of course, upon the size of the packages and its gross weight.⁴ Shippers using this style of package for their product should familiarize themselves with these special requirements in order to take full advantage of the saving in weight effected.

(d) Articles of More Than One Class

Some years ago a retail lumber company in Iowa received 8,670 pounds of roofing paper. Each roll contained a small can of cement weighing a few ounces—only enough to make water-proof the joints formed by that one roll. The entire shipment was billed at a 40-cent rate, which was the proper rate for the cement, whereas a 26-cent rate would have been charged had the small can of cement not been included in each roll.

This illustrates the general rule of all classifications which provides that when two or more articles taking different rates are shipped in the same package,

⁴ The requirements are given as rules in Official, Western, and Southern classifications.

the entire package will be charged at the highest rate. Because of this rule, the consignee of the above-mentioned shipment of roofing paper was compelled to pay \$34.68 on the shipment in question instead of \$22.54, a needless increase of freight charges of nearly 54 per cent. Had the small cans of cement been packed in a separate box by the makers of the paper this additional expense would have been saved.

It might be well to add here, as later happened in the above case, that when trade conditions demand such a mixing of goods and no one is injured thereby, it is possible to arrange with the classification committees for such joint packing of products ordinarily taking different rates. Shipments should not be mixed, however, before this question has been taken up with the proper committee and the provision for mixing legally made and published.

In shipping consignments containing several different kinds of goods (a frequent occurrence in such lines of business as wholesale hardware, dry goods, and groceries) it is important that the packer know what rate the classification provides for each kind of goods. With these in mind he can classify his shipment and pack together only those articles which take the same rate. Of course, there are often cases when the extra expense of several packages will more than offset the saving in freight charges from keeping the different classes separate, and the extra weight of boxes, etc., will make it cheaper to pay the highest rate of freight on the entire shipment.

As already suggested, goods which naturally belong together, either on account of production, condition, or because of their ultimate purpose, usually have provisions made for their shipment together. There are cases

where it may be possible to save money by so packing them. Thus the Western Classification provides for first class on certain kinds of advertising matter and second on other kinds. Yet an amount not exceeding two per cent of the total weight of the shipment may be shipped in the same package as the goods advertised and at the same rate. Bearing this in mind, it is evident that advertising matter for goods taking less than second class should always be put in the same package with the goods in order to save freight. The Official and Southern classifications have the same general provisions, although the details of the application of the provisions vary somewhat as applied to carloads.

(e) Worn-Out or Damaged Goods

An eastern wrecking company buys, among other things, burnt-out electric motors. The value of these is measured by what can be recovered from them as copper and iron scrap. One of these ruined motors was shipped to this company, billed as scrap iron and copper. This was the proper billing; yet freight charges were assessed on the motor at the first-class rate—the same which a new motor would pay. The railroad agent who checked this bill of lading against the shipment itself could see no difference between the scrapped motor and one that was not burnt out. The shipper took the matter up with the Interstate Commerce Commission for refund of charges in excess of what they would have been on scrap iron and copper, but that body held that to anticipate the lack of discernment and technical knowledge on the part of the carrier's employes, the shipper should have

broken up the motor to such an extent that there would have been no question in the mind of the freight agent that it was anything but scrap metal. In the latter case, the third-class rate would have been charged on the copper and the fourth-class rate on the iron and something like eighty dollars saved to the shipper.

Articles which are worn out or goods which have been so damaged in shipment, or otherwise, that they become valueless except as scrap, should never be billed under their original name, but should be billed and labeled as scrap or junk. Care should be taken to make them appear what they really are, even though a sledge hammer and a pair of brawny arms are needed to reduce them to a proper semblance of wreckage. The men who handle freight for the railroads cannot be expected to show the judgment of engineers in sizing up a shipment which looks too good to keep its bill of lading in countenance. One of their main functions is to see to it that the railroad gets all that is legally coming to it in the way of transportation charges; and in line with the general increase in efficiency the railroads are exercising a closer supervision of exact description of shipments. In case of doubt or where the distinction is not clear, the shipper always, and rightly so, pays the higher rate.

(f) Shipments Subject to More Than One Classification

When shipments pass from one classification territory into another so that they are subject to either of two classifications or subject to one for part of the haul and to another for the balance, it is particularly necessary to be thoroughly acquainted with the conditions set forth in the classifications. In some cases the first classification may require a different method of packing than that

demanding by the rules of the other. This is very well illustrated by the provision governing iron castings and numerous articles analogous thereto, whose classification is based on that of castings. In the Official Classification castings under fifteen pounds each shipped loose or in bundles under fifteen pounds each are first class. In all other cases, whether loose or in bundles, in bags, boxes, or barrels, if they weigh fifteen pounds or over they are fourth class. In the Western, if loose or in bundles and weighing less than fifty pounds, they take first class, while loose or in bundles and weighing one hundred pounds or more, they take fourth class.

A foundry in Official Territory shipping to points located in the same territory would naturally ship castings of fifteen pounds or over loose and wire the smaller ones together so as to make bundles of that weight. Thereby it would secure as low a rate as if the castings were put into barrels or any other package. If, however, the shipment was billed to a point in the Western Classification Territory, this particular form of package would take the very highest rate applicable to castings. The economical way to pack, therefore, would be in gunny sacks, or in some other package taking the same fourth-class rate in both territories.

In the same way the Official Classification provides for second class on leather in wrapped rolls, bundles, or boxes, while the Western makes it second when in boxes, but first when in rolls or bundles. Many eastern leather shippers consider the Official Classification alone in packing shipments destined to points in Western Territory, and ship their leather in rolls. They, or their customers, pay excessive freight charges, accordingly, on that part

of the haul which is governed by the Western Classification. Of course, boxes are expensive, and it is cheaper to pack the leather in wrapped rolls. Therefore, if the haul is but a short one, the chances are that it is cheaper to pay the excessive freight charges than to pay for the more expensive package, but on long hauls the opposite is true. This shows that it is not only necessary to study the classifications to find the lowest rate but also to make a comparative study of the different factors which determine how freight shall be packed in order to find the most economical way.

The illustration above will enable the reader to gain some idea of the importance of becoming thoroughly familiar with freight classifications in order to pack freight so as to secure the benefit of the lowest rates possible. He will undoubtedly have fully realized the truth of the statement made at first that the time will never come when some shippers do not have their goods carried at lower rates than do their competitors. There is a minimum rate at which every shipment is carried, and it is the shipper's business to post himself so that his goods are packed in such a way as to entitle them to this rate.

4. A MINIMUM OF DEAD OR TARE WEIGHT

There are two factors which, with but a very few exceptions, make up all freight charges, namely, the rate and the weight. It is, therefore, not only sufficient to be sure of having the lowest rate, but also the lowest weight. It may easily be that some advantage secured from a low rate is more than offset by loss because of excessive weight, that is, of dead weight. Dead weight is the weight of the package itself, in other words, the

tare, the shipment of which has no transportation value. The hauling of the box, barrel, crate, sack, or other container in which an article is packed is of no interest to the shipper. It is merely weight which is necessary to insure safe carriage of the article shipped. If this dead weight can by any means be reduced without lowering the protection afforded below the minimum necessary to arrival in good order, the transportation charges are reduced in the same proportion. A few illustrations will bring this out clearly.

The Interstate Commerce Commission has made two inquiries into the rate applicable on laundry soap. The testimony submitted in the first hearing, in 1891, showed that the weight of the box in which a certain brand of soap was packed amounted to one-sixth of the gross weight, while twelve years later, at the time of the second hearing, the box weighed eleven per cent of the gross weight. This means that a reduction of about six per cent had been made on all freight charged on the output of one of the largest soap factories in the country—a saving amounting to thousands of dollars a year.

The reduction in the weight of the boxes was brought about by a change in their construction. They were made much lighter but were as strong and serviceable, so far as transportation needs were concerned, as the old cases had been. They afforded all the protection that was required; anything more would have been waste of lumber and excessive dead weight.

In many instances, the rate is the same whether the article is boxed or crated. In such cases do not box, but crate the goods, as in the latter case the dead weight of equal protection will not be more than one-half of what it will be in the former. For short distance ship-

ments this may be only a few cents saved on each shipment, but the aggregate on the year's business will be considerable.

Iron castings, already mentioned, take the same rate in the Official Classification whether in barrels, gunny sacks, or wired together in bundles of fifteen pounds or more each. It is evident that when barrels are used, more dead weight is paid for than where sacks are used. When castings are wired together in bundles, there is little dead weight and when loose there is none at all.

The amount of dead weight in a shipment depends upon the kind of material used in the construction of the box or crate. Thus, some kinds of lumber are lighter than others. Dry basswood weighs about 2,300 pounds per thousand board feet while the same quantity of birch weighs 4,000 pounds. The weight of lumber also depends upon whether it is dry or green, weighing at least 25 per cent more when green than when dry. Using green or only partly dry lumber for crating purposes, therefore, means increased freight bills. Leaving crating lumber to lie out in the rain also means higher freight charges.

Then again the thickness of the stock used should be considered. In crating do not use inch stock when seven-eighths-inch stock is sufficiently strong, even though the cost is the same. There is a difference of twelve and one-half per cent in dead weight. A large shipper of buggies has all the crating dressed to a given thickness so as to save in dead weight. It is cheaper to pay the cost of dressing than to pay freight on the stock that is cut away. Often it may be well to use one thickness of strips for the main frame of a crate and lighter stock for the cross strips.

How all these conditions work out may be seen in the case of a top buggy shipped from Chicago to Kansas City. The original weight was 525 pounds, of which 125 pounds represented the crate. By using a lighter lumber, by reducing the thickness of cross strips, and by seeing that only dry lumber was used, it was possible to reduce the gross weight to 490 pounds—a saving in freight charges of thirty-five pounds, or forty-two cents per buggy—the rate being one and one-half first class, or \$1.20 per hundredweight.

The growing use of pulp board and corrugated paper boxes has already been mentioned. These are very light and when used mean a considerable reduction in dead weight. Wooden boxes made of three-ply stock of a total thickness of one-quarter inch with edge strips are light as well as serviceable. These may be wire-bound without adding materially to their weight.

Producers who ship their goods in both carload and less-than-carload lots can make considerable saving in weight by using less boxing, crating, and so on, for carload than for less-than-carload shipments. Often carload lots are in bulk, entirely eliminating the dead weight. A full carload of a single commodity can usually be packed more securely than a carload made up of many different products; for this reason, as well as because of the reduced handling, there is not as much need for protection.

Sometimes another saving in weight is possible—not in dead weight, but in weight which is paid for though not actually hauled. Some commodities, such as pleasure vehicles, cannot be loaded so as to make the total weight equal the minimum prescribed for the car used.

In such cases it may be profitable to alter the shape

of the crate, using one shape for less-than-carload shipments and another for carload shipments, particularly for long hauls with high rates. In this way certain buggy manufacturers reduce freight charges on shipments to Texas points. In standard crates three buggies can be placed in each tier in a car with a high roof, two on end and one on top of these. By using an L-shaped crate and inverting the two top ones, it is possible to load four in a tier instead of three. This means about forty-five hundred pounds added to each carload without a cent added to the freight bill—a saving of \$43.65 on a ninety-seven-cent rate.

In packing freight for shipment, then, the cost of the package, the safety of the goods, the proper classification, and the dead weight must be borne in mind. No shipment can be said to be properly packed unless all of these points have been considered and weighed against each other. It is not always possible to carry out any single factor to its limit, as some advantage gained might be more than lost in another way. Thus, it might be cheaper to pay a higher rate and save in cost on packing or in dead weight, while in other cases it might be cheaper to pay more for the container and more for dead weight so as to reduce the rate. In no case should the safety of the goods be neglected. Each and every shipment must be considered by itself.

CHAPTER II

DESCRIBING AND CLASSIFYING FREIGHT

It is just as important to describe freight shipments properly as it is to pack them properly. As mentioned before, the law provides that the rates shall be the same to all the shippers, but the most that the law can do is to assure equal opportunity; it cannot force a man to protect himself; it cannot be expected to solve for each individual the problems of his own business. Therefore, great inequality still exists in freight charges, not because of special favors extended, but because men do not realize that the changing of a word or two or the addition of a descriptive phrase on a bill of lading might reduce the freight charges by 25 or 50 per cent or even more.

Before continuing on this point it is necessary to call the reader's attention to the fact that under no circumstances whatsoever must anything in the following pages be construed as favoring a false description of any goods for the purpose of securing lower rates. While this is being practiced, though possibly not as much now as formerly, it is nothing more or less than stealing. Furthermore, it is illegal and punishable by fine and a term in the penitentiary. Only honest and legitimate descriptions and nothing else should be used in billing freight.

There are three principal freight classifications: the Official, applying in the territory east of the Mississippi River and Chicago and north of the Ohio and the Potomac rivers; the Southern, applying in the territory east

of the Mississippi River and south of the Ohio and the Potomac rivers; and the Western, which governs territory west of the Mississippi River. In many instances the different classifications overlap, and in not a few cases either one or another, whichever makes a lower rate, may be used. The railway boards of several states, as Illinois, Iowa, Texas, Georgia, North Carolina, and Florida, have published classifications applicable on shipments moving entirely within those states.

1. IMPORTANCE OF EXCEPTIONS

Besides these there are numerous exception sheets and unlimited numbers of commodity tariffs. These classifications should be studied thoroughly in order to learn just how any desired commodity is described or whether it is described under more than one name, as is also possible. The exception sheets and commodity tariffs should also be carefully examined, in order to learn whether a special ruling can be made to cover the commodity in question.

A good illustration is rake, fork, and hoe handles. In the Western Classification, these are provided for under the heading "Wooden Handles." One of the exception sheets applicable in a portion of the Western Classification Territory is known as the Western Trunk Line Exceptions, etc. If one looked through this entire exception sheet, he would find no provision for rake, fork, and hoe handles in the white. This exception sheet, however, carries an item which applies on this commodity and makes a very liberal reduction in the rate, but one will never even expect it unless he is thoroughly familiar with freight classifications. The following method of investigation and reasoning must be used

to find the lower rate: Rakes, forks, and hoes should be looked up in the Western Classification. These are found under the general heading "Agricultural Implements, Hand." This gives the clue. Is there anything in the W. T. L. Exceptions on this subject? Investigation will show that there is an item "Agricultural Implements and parts." This covers the commodity, but the rate provided is higher than that in the classification and therefore is of no value. But further investigation will bring a rich reward.

By carefully reading through the exception sheet one will come to an item covering "Lumber and articles taking lumber rates." This is a long item and has much small print. Under this head will be found the words "Agricultural Implement Wood, in the white." As hoes, etc., are agricultural implements and the turned handles are wooden parts which go into these implements, it is a perfectly proper and legitimate description of these turned handles (when not finished) to call them "Agricultural Implement Wood, in the white." Under such circumstances as these there is hardly one chance in a hundred that the rate clerk will bill a shipment of "Rake, fork, and hoe handles" at the lumber rate. And this is particularly true, as was the case of several carloads of this material, when the shipping point is located in the Official Territory and the destination is in the Western Territory and the exception applies only to part of the haul. The result of neglect in proper billing in the case of the cars mentioned was overcharges of from \$30 to \$40 per car on the entire movement. The shipping clerk might well have spent an entire week investigating how to describe the shipments in question and still have made good money for his company.

This one illustration shows the importance of making a thorough study of both classifications and exception sheets. It also illustrates how a lower rate can be secured by familiarizing one's self with the general description of the article for which a partly finished part is to be used and from that general description find a low rate on that part. No one would think of calling "hoe handles in the white," "Agricultural Implement Wood, in the white," without the knowledge that hoes, etc., are "Agricultural Implements, hand," and no one without a thorough knowledge of the classification and exception sheet is in a position to trace the connection.

2. PROPER DESCRIPTION

It is not sufficient merely to hunt up the article on which the classification is desired, but to try to think of every possible name by which that article can be called and see if it is not included in the classification under more than one name. When that has been done, study the rules in the front of the classification, where valuable information may be found. For instance, in the Western Classification there is a rule entitled "Ratings applicable on different kinds of packages." One hardly expects to find in such a rule as this the following sentence: "Ratings shown in the classification for articles made of iron will apply on the same articles when made of steel and vice versa." Just what connection there is between the two is hard to see, but that is not the question. It is the information that is valuable, and it is the shipper's business to find it and take advantage thereof.

In billing freight, it should be described as nearly as possible just as it is in the classification, exception sheet, or commodity tariff, whichever governs. Errors in bill-

ing are usually due to insufficient or improper description either of the article itself or the method of packing or both. Inasmuch as this is a subject that cannot be reduced to definite rules, it seems to be best to treat it by showing specific cases of improper description and calling attention to what the proper description would be in each instance. By multiplying these illustrations the reader will obtain a fair idea of what must be guarded against.

The omission of dimensions may cause an overcharge on commodities classified by the size of the crate or package. For instance, a shipment of cork carpet from Chicago to Centerville, Iowa, weighing 5,220 pounds, was billed as "10 crates of cork carpet" and charged at the first-class rate of sixty-eight cents per hundred pounds. But the packages were under thirteen feet in length and were entitled to the second-class rate of fifty-seven cents per hundred pounds. The proper billing would have been "10 crates of cork carpet under 13 feet in length." The words "under 13 feet in length" were omitted and it cost the shipper \$5.74. The Official Classification makes this same difference with respect to oilcloth, linoleum, etc. It also provides for various rates on buggies and vehicles, according to the length and height of the crate.

The Western Classification specifies aluminum ware, boxed, nested, first class, L. C. L. (less-than-carload), and aluminum ware, boxed, not nested, one and one-half times first class. A shipment of aluminum pails, nested, billed "5 Boxes Aluminum Ware" would be improperly described and the shipment would be rated at one and one-half times first class instead of at first class.

In the Official Classification, aluminum ware, N. O. I.

B. N., (not otherwise indexed by name) not nested, in boxes or barrels, L. C. L., is first class. Aluminum ware, N. O. I. B. N. nested, in boxes or barrels, L. C. L., second class. Aluminum ware as specified in the Official Classification includes cooking utensils. N. O. I. B. N., or not otherwise indexed by name, means not provided for in that classification under any other heading or in any other item. A shipment of cooking utensils nested and boxed, billed "5 Boxes Aluminum Ware" would be charged at first class, while if properly billed "5 Boxes Aluminum ware nested," second would be charged.

An Iowa stone cutter was being regularly overcharged on carload shipments of cut stone. He billed all his shipments as "dressed stone" and paid Class-C rates, the class provided for "dressed stone lettered or figured." As a matter of fact none of the stone was lettered or figured, and if the words "not lettered or figured" had been added to the billing, the shipments would have been charged at Class E—a reduction of approximately 25 per cent in the charges.

Then, too, classification may be determined by the composition or constituent elements of an article. Foundry facings furnish a good illustration. In the Western Classification, if the facings are of clay and coal, soapstone and coal, soapstone and tale, or of coal, they go as fourth class; if of charcoal, third class, and if of graphite, second class. If the material of which they are made is not mentioned, they will justly be billed at second class, under the item "Foundry facings N. O. I. B. N." It is too much to expect the bill clerk to tell by looking at an article what it is made of, nor would he be justified in spending much time in trying to find out. Where the shipper does

not furnish specific information, the clerk naturally, and rightly so, protects himself and the railroad company by billing at the highest rate.

Coffee should be fully described as to kind, i. e., green, roasted, or ground, and the manner in which it is packed. A shipping ticket reading "5 Sacks Coffee" is indefinite, as the Western Classification provides the fourth-class rating for roasted or green coffee in double sacks, L. C. L., and the third-class rating for roasted coffee, ground or crushed, in single sacks, L. C. L.

The Official Classification classifies green, roasted, or ground coffee, in single or double sacks, L. C. L., under Rule 26. (20% less than 3rd class.)

The Southern Classification classifies green or roasted coffee, in single bags, L. C. L., as fourth class; in double bags, L. C. L., fifth class.¹

One of the most common errors is to bill goods under a general class name when there is a lower rate on the specific kind shipped. A sandstone brick company beginning business in Wisconsin received six brick machines billed as "6 machines," and paid on them one and one-half times first-class rate. If properly billed as "6 brick machines" second class would have been charged.

A machinery manufacturing company in Chicago shipped an "iron-working machine, set up," to Clarinda, Iowa. The weight was 3,150 pounds and charges were assessed at one and one-half times first class, instead of at first class. In this case the shipment was properly described but was improperly classified because of a lack

¹ In a note the Southern Classification specifies that "The ratings for Coffee in double bags will apply when the inner bag is made of cloth or paper, either separate from the outer bag or pasted to it, if both bags are securely closed at the mouth."

of familiarity with the classification. The Western Classification provides for one and one-half times first class on machinery N. O. I. B. N., set up. Iron-working machinery is not listed in its alphabetical place in the list of individual machines which take their own rates, but under "W" is found "Wood and Iron Working Machinery N. O. I. B. N. on skids, small detachable parts removed and boxed, first class." This is almost the last item of eleven and a half pages of classification under the general head of machinery.

A few commodities are classified according to the declared or released value; in all such cases it is important not to omit the value from the bill of lading. In the Official Classification, for instance, paintings having a declared value of more than two dollars a pound are three times first class; if the value is declared to be more than fifty cents but not exceeding two dollars a pound, the rate is double first class; if not exceeding fifty cents a pound, it is one and a half times first class. Therefore, even though the value were less than fifty cents a pound, if it were not so declared, the shipment would be billed at three times first class, or just twice the rate as when correctly billed. A shipment of "Household Goods" from Chicago to Moline was billed at one and one-half times first class. Had the words, "released to \$5.00 per cwt." been added, the rate would have been first class.

Frequently the shipper is in a hurry and bills out a shipment in a single item when the different articles ought to go under different rates. Seven grate bars, with a total weight of 300 pounds, were billed as one item. This indicated that each weighed something less than fifty pounds, and was therefore subject to first class. In fact, two of the bars were considerably smaller than the

others and five of them weighed fifty pounds each and were therefore entitled to fourth class. Only the two small ones should have taken first class. The shipment should have been billed:

"5 grate bars 50 lbs. each
2 grate bars under 50 lbs. each."

Material on which some work has been done is frequently billed as "unfinished parts" of the commodity into which it is to be manufactured, thereby causing very heavy overcharges. The vehicle business especially has suffered by such overcharges.

An Iowa vehicle manufacturing company had turned its freight bills over to a freight-bill auditor who found several shipments from points southeast of East St. Louis, which were billed "neck yokes" at a first-class rate of sixty-three cents per hundred pounds north of East St. Louis. The question at once occurred to the auditor whether or not these were finished neck yokes. Investigation showed that the shipments had been billed up to East St. Louis at a rate much lower than that applicable on finished neck yokes, and inquiry addressed to the firm brought the reply that the shipments consisted of neck yoke woods turned to shape, but without either irons or leather. In this stage, the shipments were entitled to a fourth-class rate of twenty-six cents a hundred pounds, provided for in the Western Classification under "vehicle wood in the white, turned to shape," which description should have been used in making out the bill of lading. The firm had paid almost two and one-half times as much for freight as it should have done because the shipper had been careless or ignorant—or both.

Several vehicle manufacturers throughout Iowa and

Illinois receive head blocks, spring bars, reach woods, and axle beds from a town in southern Illinois. None of these is further finished than being cut to shape and should be billed as "vehicle wood in the white" and take fourth-class rate. In most cases the shipments are billed "reaches in the white," second class, axle beds as "wood axles in the white," third class, head blocks and spring bars at almost any rate from first to third.

This holds true with carload shipments as well as small lots. When billed as "parts of vehicles" they usually take class "A" rates but if billed as "vehicle wood in the white" they take class "B" rates, but oftener the same rate as lumber or a small differential higher. Vehicle manufacturers who are not overcharged in one or more of these ways are few.

Trade names are perplexing and lead to overcharges. How many bill clerks know what "Preservit" is? Shipments billed this way are almost invariably charged first class, when if properly billed as "meat preserving powders" fourth-class rate would be charged. Even when commodities have become standardized it is hardly reasonable to expect a bill clerk to know them well enough to use the proper rating, and unless a commodity is specifically provided for in the classification under its trade name, such trade name should not be used.

How the difference in description can make a considerable item was shown when a stove foundry in Quincy, Illinois, received a carload of scrap iron from Merwin, Missouri. The shipment was billed "1 carload junk" at a twenty-six cent rate. If the shipment had been billed "1 carload scrap iron," an eleven and one-half-cent rate would have been used and \$46.07 saved in the freight charges.

Often goods are damaged and become junk or scrap and again credit is sometimes given when broken or defective parts are returned. Such shipments should not be billed under their original name or as parts of the article to which they belonged. A box of broken castings belonging to a corn planter, billed "1 box corn planter parts" would be billed at first class, but if billed "1 box scrap iron"—which it really is—the charges will be assessed on the basis of fourth class. A shipment of worn-out canvas from Worcester, Mass., to Chicago was billed as "10 bales old canvas" at first class. If properly billed as "10 bales rags, compressed" fifth class would have applied. The Standard Paper Company had a lot of paper that had been damaged and shipped it back to the mill. Taking for granted that scrap paper took the lowest possible rate, shipment was billed as such and charged at third class. Had it been billed "Paper damaged, in crates, returned to paper manufacturers" it would have taken fourth class.

A shipment of veneer one-eighth inch in thickness was made from Grand Rapids, Michigan, to Moline, Illinois, billed as "Veneer," and a forty-cent rate was charged. Had it been billed "lumber one-eighth inch in thickness" the rate would have been twenty-nine cents per hundred pounds. As mentioned before, many shipments pass from one classification territory into another, so that the first part of the haul is subject to one classification and the last part to another. It has already been shown that in such cases it is important that both classifications be studied in order to pack shipments so as to receive the advantage of the lowest rates for the entire haul. This is equally true when it comes to describing goods on the bill of lading. One description may be satisfactory for

one part of the haul but not for the other. To illustrate: A shipment of tissue wrapping paper from New York to Des Moines is subject to the Official Classification up to the Mississippi River crossing and beyond is subject to the Western. If billed as "tissue paper," it will take third class to the river and second beyond, but if billed as "tissue wrapping paper," it will be hauled the entire distance at third class.

The Official Classification provides for "Tables N. O. I. B. N., K. D. or folded flat, wrapped, crated or boxed, 2d class." The Western Classification provides for "Tables N. O. I. B. N., K. D. or folded, in packages at 2d class" and "Extension Tables, K. D. flat, wrapped, crated or boxed, at 3d class." The Official Classification does not specially provide for extension tables. If a shipment consisting of extension tables, K. D. flat, wrapped, crated, or boxed originated in the Official Classification Territory and was destined to a point in Western Classification Territory, the proper description on the shipping receipt would be: "Extension Tables, K. D. Flat (wrapped, crated or boxed, as the case might be)." Inasmuch as extension tables are not specifically provided for in the Official Classification, the shipping clerk might easily bill the shipment as "Tables N. O. I. B. N., K. D. (wrapped, crated, or boxed, as the case might be)" and in that event there would be an overcharge equal to the difference between second and third-class rates for that part of the haul which was governed by the Western Classification.

One more case might be cited as showing the differences between provisions of different classifications for the same articles:

The Official Classification reads as follows:

Carriages, Children's or Toy—

Not crated or boxed:

L. C. L. not taken.

Crated or boxed:

S. U., wheels on.....3t1 (three times 1st)

S. U., wheels off.....D1 (Double 1st)

K. D., all parts detached from bodies and packed flat, bodies not nested.....1½

K. D., all parts detached from bodies and packed flat, bodies nested.....1st class

Carts, Children's or Toy—

Not crated or boxed:

L. C. L. not taken.

Crated or boxed:

S. U., wheels on.....3t1 (three times 1st)

S. U., wheels off.....D1 (Double 1st)

K. D., or folded (not flat),

Wheels on.....D1 (Double 1st)

Wheels off.....1½ (one and one-half)

K. D. flat.....1st (1st class)

K. D., flat or foiled flat, crated or boxed, N. O. S. (not otherwise specified).....2nd class

The Western Classification reads as follows:

Carriages and go-carts, baby or children's—

S. U., wrapped.....3t1

S. U., boxed or crated.....2½t1

K. D., or folded flat, boxed or crated.....1st

Note.—Children's carriages and go-carts, to be entitled to K. D. rating, must have wheels and canopies detached, the canopies packed inside the bodies and the wheels between the bodies and the axles, or upon the sides of the bodies, the bodies being de-

tached from the springs and brought down between the springs as far as possible.

It requires particular study and a little judgment to secure the best rate on commodities which are not classified in the classifications, but which are subject to rates applicable on analagous articles. For example: "Davenport," upholstered, are not specified in the classifications; the term "Davenports" should not be used on the shipping tickets, in describing shipments, as in many cases shipments so described are charged at the rating specified in the classifications for furniture, N. O. I. B. N.; davenports, being analogous to lounges and couches, will take the same class or rate, when packed for shipment as shown in the classifications of the latter articles.

3. PARTS OF ARTICLES

Shipments should not be billed as parts unless it is made plain, by a heading, what the shipment really is and then the list of parts added is only to facilitate checking the shipment. The following is a description of extension tables used by one shipper:

" ——— crt tops
 ——— " filling
 ——— " legs
 Pkg. castors, nailed."

This certainly does not give any information which will be of much value in classifying the shipment and it surely is not one which will secure the best rate. A proper way to bill this shipment would be:

" ——— Extension tables K. D. flat as follows:
 ——— crates of tops
 ——— crates of filling
 ——— crates of legs
 1 package castors attached."

And still, there are cases when it is not only proper to bill articles under their component parts but absolutely necessary to do so. As such might be mentioned freight elevators and wagon scales.

In the Western Classification freight and passenger elevators are classified as follows:

Hoisting Machines:

Freight, passenger, etc.:

S. U.D1

K. D. as follows:

Parts of, not otherwise indexed by name.....	1
Beams iron	4
Bed Plates	4
Channels	4
Cross heads, iron or wood.....	3
Cylinders	3
Derrick Skips, Steel or Wooden.....	3
Derrick Irons, not otherwise indexed by name..	4
Elevator platforms without attachments.....	3
Guides (T irons)	4
Hangers, iron in bundles or boxes, weighing each 100 lbs. or over.....	4
Lumber	3
Nuts and Bolts in Boxes.....	4
Posts, wooden, for elevator doors.....	3
Rods	4
Rope other than wire	
Shafting	4
Shift Knees for elevator gates, in crates.....	3
Weights	4
Wheels and Gearing.....	1
Wire Rope	4
Wire Rope clips or clamps in barrels or boxes..	4

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Elevator gates, wooden.....	3
Gasoline Hoists, loose, on skids or in boxes or crates	1
Hoisting Drums and Engines combined, steam or electrical, loose, on skids or in boxes or crates	1
Hoisting Drums, cast iron on skids.....	2
Iron or Steel and wire work for elevator en- closures:	
In Boxes	2
In Crates	1

It is very clear that unless each and every part is carefully listed and described by its correct name the first-class rate provided under, "Parts not otherwise indexed by name" will be charged, and as most parts take either third or fourth-class rate there will be heavy overcharges. It is also important that the weight of each individual part be given.

Wagon scales in crates with small parts in barrels or boxes take second class, L. C. L., in the Western Classification. Under the item scale parts, scale frames, for platforms of wagon scales, steel, completely K. D., in packages or loose, are provided for at fourth-class rates. If, in billing a wagon scale with the platform frame it is described as one wagon scale, three parts, the entire lot would be charged at second class. Furthermore, it is not enough to specify the scale frames separately. It is also necessary to give the weight thereof. If this is not done, the bill clerk is very apt to bill the entire shipment at second class because it appears that the frame is only a small part of the shipment, and he may consider it too much trouble to have it weighed, and, in fact, it may be

loaded in the car before the bill clerk gets the billing and therefore it may be impossible to determine the separate weights.

4. ABBREVIATIONS AND DITTO MARKS

It would hardly seem necessary to say that abbreviations and ditto marks should be used sparingly in billing freight, and yet a discussion of the proper billing of freight would be incomplete without a mention of this point. Abbreviations should never be used unless they are universally known, such as K. D., S. U., N. O. I. B. N., etc. It is dangerous to abbreviate names of articles. The billing of freight is transcribed so many times that if it is not perfectly clear, there are many chances for error. One illustration will suffice. A shipment billed as "10 Bundles of W. paper" might be interpreted in at least four different ways, either as wall, waxed, wrapping, or writing paper with varying rates from first to fourth class. As these different kinds of paper are not manufactured at the same mills, it would be an easy matter for the shipping clerk to assume that "W. paper" only meant the particular one which he shipped.

One example will show how shipments are in many instances charged a higher rate than they should be, on account of carelessness on the part of the shipper by use of ditto marks on the shipping tickets. A shipping ticket read

"3 Boxes tinware nested
2 Bbls. " " "

It should have read

"3 Boxes tinware nested
2 Bbls. tinware nested."

As will be observed the "ditto" marks under the word nested are so faint, that a rate clerk would overlook it and the barrels of nested tinware would be charged at the higher rate, as tinware not nested.

It is not only necessary to use care in describing the goods themselves and the manner of packing, but sometimes it is essential to indicate under what conditions the shipment is being made. This is particularly true of returned shipments.

5. RETURNED ARTICLES

Four different classes of articles take a lower rate when returned to the original shipper or manufacturer than when originally shipped. The rules governing return shipments differ greatly in different parts of the country and require watching.

So-called "carriers," including barrels, half-barrels, bags, sacks, bottles, cases, butter casks, jars, carboys, egg cases, and a long list of other articles in which goods are carried when shipped, are, as a rule, returned to the shipper at a rate much below that for which they would be carried if unused.

A vinegar factory in a western city employed a traffic manager. One of the first things he discovered was that in returning "empties" most customers billed them as "old barrels," and freight charges were assessed at the same rate as on barrels, namely, first class. He immediately gave instructions that the words "carriers returned, guaranteed" should always be added to the billing of such shipments. This reduced the rate to fourth class, saving approximately one-half of the charges. The low rate on this class of articles is justified because the re-

turn shipment is a service incident to the shipment of the commodity carried in them.

Another class of goods returned at a lower rate than that at which shipped out, includes fair exhibits. The general practice in many parts of the country is to return such exhibits free. In order to secure advantage of the free return they must be shipped back by the same route over which they were originally forwarded and within a certain period of time after the expiration of the fair. Billing must be accompanied by a certificate from the secretary of the fair, stating that the articles have been on exhibition and have not changed ownership. In a portion of the territory covered by the Official Classification, goods, if exhibited at more than one place and returned by a different route, are charged at full rates, but provision is made for a refund on the basis of one-half rates for the round-trip shipment.

The exceptions to the Official Classification provide that shipments may be returned to the shipper under certain conditions, either after shipments have reached destination or have been stopped in transit short of destination. The charge for the return movement is usually made 50 per cent of the rate from point of shipment to final destination or to the point at which shipment is stopped and returned.

A shipment of household goods was shipped from Cincinnati to Chicago, the rate being 40 cents per 100 lbs. After shipment had gone forward, the shipper decided to locate in the South and ordered the shipment stopped in transit and returned to him at the original point of shipment. The shipment was stopped at Indianapolis and was billed back to Cincinnati at the first-class rate, whereas the proper charge should have been on the basis of 50 per cent of the first-class rates.

The fourth and last class of returned shipments includes goods sent back for repairs. These are usually handled at one-half of the full tariff rate and the application of the provision is general, though subject to numerous exceptions and special requirements. The most common of these requirements—although not applicable in all cases—are: Goods must be returned to the original point of shipment by the original route; reference to out-bound shipment must be made on the billing; charges must be prepaid or guaranteed by the original shipper.

In making any return shipments it is always advisable to learn the exact conditions under which the reduced rates are applicable. Requirements are often in detail and the failure to fulfill any part of them may lead to higher rate charges without any basis for securing refund in the form of a claim.

The above instances are taken from actual experience and show the necessity of exercising extreme care in describing goods when making out the bill of lading or the shipping ticket. The three main points to watch are the description of the goods themselves and of the package and in some cases a careful statement of the conditions under which the shipment is being made. As to the description of the goods themselves, the shipper should always use the names of the articles by which they are known in the classification, exception sheet, and the commodity tariff, as the case may be. The classification as well as tariffs must be carefully studied in order to ascertain whether or not different rates are provided for the article in question depending upon the material, the value, the extent to which it is finished, its use, etc. The description must be as detailed and explicit as is necessary to avoid any misunderstanding by the unversed

bill clerk as to what the article really is. The description of the packing should state whether S. U. or K. D. or K. D. flat, whether nested or not, to what degree compressed, what style of package used, whether box, barrel, keg, crate, sack, bundle, etc., as the case might be. Both in the description of the commodity itself as well as of its container no abbreviations should be used except those which are fully established and generally known; ditto marks should be scrupulously avoided.

In making a statement of the conditions under which a shipment is made, care should be exercised not to omit any detail required by the rule which provides for its transportation at a lower rate than that at which it is ordinarily carried. If these suggestions are carefully followed, the shipper will avoid many costly mistakes which he might otherwise make. It must not, however, be presumed that the discussion above covers the subject exhaustively. No one person's experience, however wide, will bring him in touch with all the problems of properly describing freight shipments, but the foregoing are sufficient to give a clear idea of what the shipper must do to secure the advantage of the lowest possible rate and by what methods he may study classifications and rate sheets to the best advantage. Possibly the foregoing discussion is of the greatest importance in so far as it makes the reader aware of the fact that there really are numerous opportunities for making expensive errors in describing freight for shipment, for one aware of dangers can usually devise his own means of avoiding them.

CHAPTER III

WEIGHTS AND THEIR RELATION TO FREIGHT CHARGES

As mentioned under the heading of "Packing Freight," freight charges are determined by two factors, namely, the rate and the weight of the shipment. A reduction in the weight of a shipment is just as effective in reducing freight charges to a minimum as is a reduction in the rate, and a treatise on reducing freight charges to a minimum would be incomplete without a consideration of weights. It has already been said that false description of freight is punishable by fine and imprisonment. Under-billing is also illegal. A severe penalty is prescribed for wilfully making a false statement as to the weight of a quantity of merchandise tendered to a public carrier for transportation. But there are many causes which add to the weight of a shipment—especially of carloads—which fall as a burden upon the shipper unless he is alert, and which he might avoid.

1. TARE WEIGHT

The ordinary method of determining the weight of carload shipments is to weigh the cars loaded and from this deduct the weight stenciled on the car. This permits two chances for error: gross weight and stenciled weight. The practice of weighing cars in train is likely to cause errors of the first kind. This, however, is not the most serious chance for error. The weight stenciled on a car is the weight of that car when it leaves the car

shops, new and clean. When that car comes into use, it is subjected to many conditions which increase its weight. The car is made of dry lumber but when it comes out into rain and into damp climates, the wood absorbs considerable quantities of moisture. This makes the car actually weigh more than the stenciled weight. This is not purely theoretical but actually takes place.

In an important case before the Interstate Commerce Commission, the principal witness for one of the defendant carriers testified that the weight stenciled on freight cars was usually from 500 to 800 pounds less than the actual weight. If this is true, every carload shipment weighed in the usual way, is charged from 500 to 800 pounds too heavy, for if the tare weight deducted is that much less than the real weight the load has to make up the difference. For this reason it is very important that the shipper know exactly how much weight is loaded into a car. When there is a discrepancy between the weighing association's weight and the shipper's weight, the car should be ordered reweighed before delivery and weighed empty as soon as unloaded.

It is not only error in the tare weight that adds to the weight of a carload shipment. Frequently there is foreign matter either in or on the car which adds to the weight and is charged as part of the shipment.

2. FOREIGN MATTER

An Indianapolis firm received a carload of bar iron. The invoice called for 36,500 pounds, while freight charges were based on a weight of 37,760 pounds. On unloading, it was found that the difference in weight was at least partly accounted for by a lot of hard refuse matter stuck to the floor of the car. Of course the weight

of this was not included in the stenciled weight of the car because it was not in the car when it was weighed. Most shippers will not load a car containing anything that might injure the goods, but often foreign matter is allowed to remain in cars, especially if it is difficult to remove. The minimum freight charge is not obtained where such matter is allowed to remain in the car.

Another illustration is that of a Wisconsin woodenware company that shipped a car to the Pacific Coast. When the freight bill was sent to the shipper, the charges were assessed on a weight which exceeded by several hundred pounds the actual weight as determined by the shipper. The dispute with the railroad company was not settled until some one proved that snow and sleet fell the day that the car was loaded out, and as the records did not show that any allowance had been made for snow and ice the claim was allowed. Even when allowances are made, it is usually merely a guess, and for this reason careful attention must be given this matter in northern climates.

These instances show some of the many possibilities for overcharges due to excessive weight, and the only safe method is for the shipper to weigh his goods. The saving will pay for the trouble. The weight should be determined before the car is shipped so that it can be compared with the railroad scale weights, for it is much easier to adjust a difference before the car has been shipped and unloaded than afterward.

There are other chances for paying for weight not shipped than those from excessive actual weights—namely, those resulting from certain required minimum weights which are in excess of the actual weight loaded. In most cases when a shipper has a smaller load or less weight to ship than the required minimum, he cannot

avoid paying charges on freight not carried. There are, however, numerous instances when he can bring about a reduction in the minimum weight. A few instances will serve as suggestions as to how this can be done.

3. SIZE AND CAPACITY OF CAR

Many tariffs provide that in all cases the minimum weight shall be the marked capacity of the car. In such cases it is necessary to anticipate shipments in order to secure cars of the proper capacity.

A North Dakota shipper had a carload of grain for Minneapolis which had to be shipped on a certain day. He placed his order for a car on the day before the shipment had to move. The grain weighed 60,000 pounds, but the only available car was one with a capacity of 80,000 pounds. As the shipment could not be held until a car of smaller capacity could be secured, he was compelled to pay freight on 20,000 pounds for which he received no service. If he had ordered a car with a 60,000 capacity reasonably early, and then the railway company had not been able to supply it, the 60,000 minimum would have been protected even though the car with a capacity of 80,000 pounds was used.

When the minimum weight depends on the length of the car, as is the case with numerous commodities, it is extremely important to order cars, the length of which gives them minimum weights less than the weight of the shipment. It might at times be somewhat easier to load a forty-foot car instead of a thirty-four foot one, but the difference in freight charges more than counterbalances this. In this connection it is important for the shipper to become thoroughly acquainted with the different sizes of cars of the respective railroads over which he ships.

A certain city in Illinois is tapped by three different railroads. Two of these have 34-foot and 40-foot cars. The other has 34-foot, 36-foot and 40-foot cars. A shipper in that city frequently makes shipments that weigh somewhat more than the minimum weight for a 34-foot car but not enough for a 40-foot car. At the same time a 34-foot car is not large enough to hold them. In such cases he orders a 36-foot car from the third railroad. This car holds his goods nicely and has a minimum sufficiently low so that there will be no charges to pay on freight not carried.

Shippers less fortunately situated, that is, those on railroads which do not have cars of this size, must require their freight agent to bring in some foreign car of the desired length and, if he cannot do so on reasonable notice, compel him to protect the minimum of the car ordered. Information as to sizes of equipment may be secured from the Equipment Guide to be found at all of the more important freight offices.

When the minimum weight depends on the length of the car, and the goods are of such a nature that they can not possibly be loaded to the prescribed minimum, as is the case with many light and bulky articles, large savings may be made by carefully studying the dimensions of different cars available for the business. A manufacturer of pleasure vehicles in one of the north central states made valuable use of a thorough knowledge of the equipment at his disposal. The firm was making shipments to Texas common points. The rate was ninety-seven cents per hundred, subject to a sliding scale of minimum weights varying with the length of the car. It was found that the so-called fifty-foot cars of one

railroad were only forty-nine feet, six inches long. The minimum for these cars was 13,900 pounds while that for the fifty-foot cars was 14,200 pounds, and the former loaded in every way to as good advantage as the latter. By using a forty-nine foot six-inch car nearly \$3.00 per car was saved. The same railroad also had some forty-six foot cars which took a minimum of 12,700 pounds, making a saving of 1,200 pounds, or \$11.64 per carload, when one of those could be used.

Pleasure vehicles cannot be loaded to good advantage in ordinary forty-foot cars because these cars are considerably lower than the fifties. A few railroads, however, have forty-foot cars that are just as high as the fifties. In these "high forties," as they are called, it is possible to load twenty per cent more than in the lower ones—a marked saving, and particularly so when this means the difference between using a forty-foot and a fifty-foot car.

The Western, Official, and Southern classifications all have rules which provide for sliding scales of minimum weights applicable on light and bulky freight, and this principle can be applied generally throughout the country.

When the minimum weight depends upon the length of the car it is always the inside length, not the outside, which applies.

A car of third-class freight was shipped from a point in the territory covered by the Official Classification. The rate was forty cents per one hundred pounds and the minimum weight was 10,000 pounds for a standard car, i. e., one thirty-six feet long. The car loaded was fifty feet, inside measurements, and charges should have been assessed on a basis of 16,200 pounds. The outside measurement was over fifty feet and six inches, and charges

were assessed on 20,000 pounds, which is the minimum weight for fifty feet, six inches and over. This resulted in an overcharge of 3,800 pounds, or \$15.20. The saving on this one shipment would have paid the shipper to spend a full day posting up on his classification rule, and yet it was allowed to go through unnoticed.

4. DUNNAGE

There is still another source of discrepancy in determining the actual weight of freight shipments. These differences are the result of the practice of making allowances for dunnage and for preservatives included with perishable goods. Dunnage includes blocks and racks used in bracing freight on cars, linings put into box cars, etc. Classifications, exceptions to classifications, and commodity tariffs make varying allowances for dunnage. While it was previously the case that carriers made allowances for dunnage on shipments in box cars, these allowances have recently been considerably curtailed, but provision is still made for dunnage upon shipments on flat cars and for temporary lining or flooring. As any allowance that is made for dunnage represents a clear saving, publications of the carriers should be carefully studied to see what provisions they contain. The Western Classification makes an allowance to exceed 500 pounds for standards, racks, etc. Some of the State Classifications make similar allowances. Texas and Illinois are especially liberal in allowing for blocks and racks. These allowances are provided for in the rules governing the classifications, and these are found in front of each classification. Under certain conditions, allowances are also made, at times, for feed and water.

The average business man takes so much for granted in his dealings with the railroads that he does not appreciate how much he might save, even in this seemingly simple matter of the weight of his shipments where it is so easy to pay for freight service that is not rendered.

The matter of dunnage is especially important to shippers of machinery, as it is often necessary to hold large machines in place by bracing, standards, etc., especially when flat cars are used. If a consignment of machinery were moving from New York to Chicago, and the machinery were rated at second class, the allowance of 500 pounds made by the Official Classification for dunnage would mean a saving of \$3.25, which would in many cases pay for the lumber used in bracing the shipment. Care should always be exercised to show the weight of the dunnage separate from the weight of the commodity itself, so that the carriers will have no trouble in distinguishing the two weights.

CHAPTER IV

MISCELLANEOUS MEANS OF REDUCING FREIGHT CHARGES

There are numerous things that might be done to reduce freight charges to a minimum which do not properly pertain to the packing of freight so as to secure either the best rate or the lowest weight; neither can they be properly included under "Describing and classifying freight" nor "Weights and their relation to freight charges." It will therefore be necessary to group these together and discuss them as "Miscellaneous means of reducing freight charges."

1. ERRORS IN FREIGHT BILLS

It would hardly seem necessary to caution shippers to check extensions of their freight bills, and yet men who would not think of paying any other bill without scrutiny of the extensions will pay their freight bills without a thought of a possibility of error in this connection. This is probably due to the complexity of freight rates and a general feeling of inability to determine accurately what freight charges really should be. Still that is no excuse. A failure to check extensions can easily result in serious overcharges as the following case shows.

A railroad cashier made an unintentional error of \$10 in the extension of a freight bill. Later he discovered that the overcharge had been paid without question. The temptation was too strong. He put the \$10 aside and waited to see if the error would be detected. As it was not, other "errors" were made deliberately. But this

might easily be detected; so the cashier hit upon the idea of raising the weight on the firm's bills all the way from one to ten thousand pounds, retaining the difference between the original and the railroad company's stub. In this way he pocketed \$300 before his game was detected, and then not by any employe of the company, but by a freight expense-bill auditor.

This same cashier raised the weight of a carload of lumber for another company from 30,000 to 40,000 pounds without detection until the freight bills were audited some two years later. Both these firms were managed by good business men—men who do not think of paying other bills without checking them as well as checking the goods against the bills. Yet the freight bills were paid apparently without any effort to verify the basis of the charges or to analyze the conditions which might affect these charges in their favor or against them. These firms are representative of a large class of shippers.

2. AMENDMENTS

Amendments to tariffs and classifications are a constant source of error in freight charges. A reduced rate may be in effect for months and even years before it is noticed, while all shipments moving in the interval are overcharged. It is a very easy matter for a bill clerk to take for granted that there have been no changes in a rate, especially if it has been in effect for years, and so not take time to look through the amendments. In ninety-nine cases out of a hundred his assumption may be correct, but when he is billing hundreds of shipments there are many chances for error. How extensive such errors may become is shown by the following case.

Various less-than-carload quantities of cucumbers were

bought by an Iowa pickling company from farmers within a radius of fifty miles of the works. The cucumbers were shipped in sacks, and the Iowa Classification provided a rate of first class for them. Accordingly, the company paid freight charges of from fourteen to twenty cents a hundred pounds, varying with the distance. This company was persuaded by a freight expense-bill auditor to send in their freight bills to be checked. The auditor glanced through the bills and decided that they were an extremely unpromising lot; all one class of freight, charged straight class rates based on distance tariff—the simplest kind of freight rates in existence.

This was a case, if there be any such, in which there might be some excuse for assuming that the rates were correct. But a freight-bill auditor does not assume. There was not much to investigate, but there was one thing and that was done carefully. The Iowa classification was studied carefully, and nothing better than first class could be found. Then amendments were looked for, and only one was found, but that carried a single-line item which made cucumbers, in sacks, less than carload, fourth class. This amendment had been in effect about three and a half years without being noticed and during the entire time freight charges on these shipments had been exactly double what they should have been. Overcharges aggregating \$400 were collected because of the discovery of a single item in a one-page amendment.

3. C. L. MINIMUMS FOR L. C. L. QUANTITIES

Most classifications provide that the charges on a smaller quantity shall not be greater than those on a larger quantity of the same article. This means that the charges for a less-than-carload shipment should never

exceed these on a carload. Frequently this fact is overlooked in making L. C. L. shipments. For example, 13,000 pounds of machinery from Willoughby, Ohio, to Ft. Madison, Iowa, were billed at the less-than-carload rate of 58.5 cents making the charges \$78.05. By using the carload rate, 26.5 cents per hundred and a minimum of 24,000 pounds, the charges would have been \$63.60—a saving of \$12.45.

Sometimes the difference between the carload and less-than-carload rates is so great that even though the weight of the shipment is but a third of the carload minimum it is cheaper to bill as a full carload shipment.

Nor does the rule apply merely to carload shipments as the maximum. In the Illinois classification, for example, stoves are third class, but in lots of 12,000 pounds they are fourth class, while in carloads, fifth class. All less-than-carload shipments are subject to a maximum charge equal to 12,000 pounds at fourth class.

4. LOCAL AND THROUGH RATES

Before the passage of the Hepburn Act the rule of the Interstate Commerce Commission declared that whenever the sum of two or more local rates made the charges less than the published through rate, the sum of the locals applied. This often gave the wide-awake traffic manager opportunity to secure better rates than his competitor. The Commission has ruled that under the new law, the through rate, irrespective of the sum of locals, is the only legally published rate. This ruling has greatly reduced the chances for securing advantages, but the opportunity for securing benefit of the sum of the local rates is not entirely done away with. It does, however, require greater skill to secure the benefits. For most

long hauls—and these are usually the only ones on which the sum of the locals can be figured—there are two or more competing routes. Frequently there is some junction point via which the through rate does not apply. If the shipment is sent through this junction the sum of the locals must be used, since there is no other rate. In such cases, it is better, however, to request the railroad traffic departments interested to reduce the published through rate to the sum of the locals. Most railroads will co-operate as soon as the matter is brought to their attention.

The through rate is the legal rate and as such must be paid, but in most cases the Interstate Commerce Commission will award reparation on the basis of the sum of the locals. Rule 56-b of Tariff Circular 18-A is quoted below, as setting out the stand of the Commission:

Many informal complaints are received in connection with regularly established through rates or fares which are in excess of the sum of the intermediate rates or fares between the same points. The Commission has no authority to change or fix a rate or fare except after full hearing. It is believed to be proper for the Commission to say that if called upon to formally pass upon a case of this nature it would be its policy to consider the through rate or fare which is higher than the sum of the intermediate rates or fares between the same points as *prima facie* unreasonable and that the burden of proof would be upon the carrier to defend such higher through rate or fare.

NOTE.—Attention is called to the fact that section 4 of the Act, as amended, prohibits a through rate or fare that exceeds the sum of the intermediate rates or fares that are subject to the Act. The term “intermediate rates” as used in said section is interpreted to mean the straightaway or direct-haul rates or fares, and not to include any back-haul charge.

Besides the above rule, the principle has been upheld in a long line of individual cases.

It should be borne in mind, however, that the circumstances in some cases may be such that the Interstate Commerce Commission will uphold an adjustment of rates which makes a through rate in excess of the sum of the locals. In the case of the Randolph Lumber Company vs. Seaboard Air Line Ry., 14 I. C. C. 338, 339, we quote:

It may, in exceptional cases, happen that the through rate may properly be even greater than the sum of the locals, but if rates were to be established *de novo* upon correct principles, it would generally be less.

The sum of the locals may also be secured by shipping to the junction point and having someone there re-bill the goods as a new shipment. An Iowa buggy firm made less-than-carload shipments into Nebraska. The Western Classification, which governs the through rate, provides for one and one-half times first class on buggies K. D. and crated less-than-carload, while the Iowa Classification makes the rate first class. To one point the through rate was \$1.80. The local rate to Council Bluffs (first class) was fifty-seven cents and the rate from there to destination (one and one-half times first class) was ninety cents, making a total of \$1.47, or a saving of thirty-three cents per hundred pounds.

Through rates are not published between all points, and under these circumstances the sum of the locals must apply. In such cases it is often possible to figure different rates on different junctions even on the same route. To illustrate: the charges on a carload shipment from Memphis, Tenn., to Rock Island, Ill., by the M. & O., care of the C., B. & Q. at East St. Louis were assessed on the basis of the rate to East St. Louis plus the local

rate from there to Rock Island. By using the rate from Memphis to Cairo and the through rate from Cairo to Rock Island, the charges on the car were reduced \$9.14.

Frequently a saving in rates is only apparent, not real. For example, in Iowa, as in many other places, rates are based on the actual number of miles the shipment is hauled. Instances may be found where the rate via one junction-point is a trifle lower than that via another, but at the first junction point there is a transfer charge of from three to five cents per hundred pounds, while at the other there is none. This extra charge may more than offset the difference in rates, and must always be considered in routing shipments. Freight agents are in a position to supply information concerning these transfer charges.

5. MIXED CARLOADS

Whether carriers should permit the mixing of two or more different commodities in the same car under a carload rate is a question of long standing. The Official Classification authorizes the practice in a general rule, while the Western and Southern permit it only when goods must be shipped together because of commercial conditions. Both the practice of mixing and that of refusing to allow mixing of carloads has been upheld by the Interstate Commerce Commission on the grounds that any change would upset commercial conditions of long standing. The item must be watched with the greatest care at stations where two or three classifications are used. Bill clerks often overlook this rule of the Official Classification and assess charges separately on the various articles shipped in a mixed carload lot.

A manufacturer at a Mississippi River point loaded a

car for Indianapolis consisting of one-half of agricultural implements and the other half pleasure vehicles. Agricultural implements took fifth class with a minimum of 20,000 pounds for a standard car, while pleasure vehicles took third class with a 10,000-pound minimum. When the freight bill was received, freight charges were assessed on the implements as one carload and on the vehicles as another, instead of on the actual weight of both articles (it being more than 10,000 pounds) at the vehicle rate. The total charges were \$100 instead of exactly one-half that amount. The rule governing such shipments declares that the entire shipment shall be billed at the rate for the highest classed commodity and at the minimum applying in connection with it, unless the actual weight is greater, in which case the actual weight is used.

A carload of surrey bodies and seats was shipped from Cincinnati, Ohio, to Moline, Illinois. The bodies were billed 10,000 pounds at the third-class rate of forty cents, and the seats, which in straight carload lots took fifth class, were billed as a less-than-carload shipment of 3,600 pounds at second class, or fifty cents. As the total weight of the bodies and seats together did not amount to 10,000 pounds, the full \$12 assessed on the seats was an overcharge.

6. SHORTENED ROUTES

In order to shorten their running time between cities, in order to reach some important shipping center, or to increase their traffic by entering new territories, railways frequently build short cuts, buy or lease smaller lines, or make extensions. In this way the distance between many towns and cities has been shortened, and whenever a distance tariff and actual distance is used, the rates are

reduced. Traffic managers, however, frequently overlook the shortened route when figuring rates, especially if the change occurs at some distant point.

When the C. M. & St. P. inaugurated fast passenger service between Chicago and Kansas City, it built a new line between Davenport and Ottumwa, Iowa. This affected the rates from Davenport to several points southwest thereof. Just what effect this had on the rates can be shown by considering a carload of lumber from Davenport to Seymour, Iowa. The distance over the old roundabout route via Oxford Junction and Marion was 225 miles with a nine-cent rate. By the short cut it was only 154 miles and the rate was seven and a half cents. It usually takes a rate clerk some little time to become adjusted to such changes as these, and unless the shipper is awake to the situation, overcharges are occurring in the meantime.

7. EXCEPTION SHEETS

The "exception sheet" has proved a fruitful source for overcharges. Complicated and voluminous though it sometimes is, the possibilities of saving are so great that a mastery of it is essential. The Southern Classification, for example, contains something like sixty-seven pages followed by one hundred and sixty-four pages of exceptions applying to various kinds of traffic, either entirely within a single state or for particular junction points or other cities. Exceptions also apply on through traffic passing over more than one railroad or on local traffic on a single road and even on only one division of a road. Moreover, these exceptions govern only when specifically provided for in the tariff.

Exception sheets are issued by the different railroad

committees. The Western Trunk Line Committee issues one applying on traffic from the Official territory and another on business, roughly speaking, within the states of Wisconsin, Minnesota, Iowa, Illinois, Missouri, Kansas, Nebraska, and parts of the Dakotas. The Trans-Missouri Freight Bureau, and the committees for regulating traffic to the Southwestern States have their own exceptions. Besides all these, many railroads issue their own exceptions, rules, and regulations.

No shipper can be sure that he has secured the lowest rate until he has referred to the exception sheet. A few cases will show how these exceptions affect freight charges. An Iowa wagon manufacturer made carload shipments which were billed according to the Western Classification at Class "A" with a minimum of 24,000 pounds. The Western Trunk Line Exceptions which were applicable, provided for Class "A" with a 20,000 minimum—the same rate but a reduced minimum. The result was that the shipments were overcharged from 1,000 to 4,000 pounds, the differences between actual weight and the wrongly applied minimum of 24,000 pounds.

A hardware store in central Illinois received several carload shipments of wire fencing from Waukegan. These were charged at a commodity rate of twelve cents. The Western Trunk Line Exceptions provided, however, that "fence wire and wire fencing" shall take "wire rates." Since the wire rate was only nine cents, each shipment had been overcharged about \$10.

The case of classifying rake, hoe, and fork handles as "Agricultural Implement, wood in the white" already referred to is another good illustration.

The matter of commodity tariffs is too complicated

to do much with in this treatise, but it seems only right to say that their name is legion and a thorough knowledge of them is essential to securing the best rates. A traffic manager cannot become too well versed in commodity tariffs. They are a continual opportunity for fruitful study.

The foregoing instances are not given as the only miscellaneous means of reducing freight charges to a minimum. Far from it! It would be impossible to cover this field entirely, and if it could be done, there would probably be new situations developed tomorrow.

CHAPTER V

SUMMARY

The student must not get the impression from this treatise that there is an overcharge hidden in every freight bill. Many uninformed shippers seem to think so, and accuse the railroad companies of being robbers, etc. This is entirely wrong. The railroads do not overcharge purposely, but with the great amount of business they have to handle, often in a limited time, and with the kind of help they have to hire in many cases, the number of overcharges is not very great. In fact, it is often surprising that there are not more. Hundreds of freight bills are correct where one is overcharged; yet the instances where overcharges do occur are sufficiently numerous to make a thorough study of freight matters extremely profitable.

The foregoing treatise has discussed the following points: (1) The necessity of packing freight with a two-fold point of view, namely, that of securing the lowest rate and that of eliminating as much dead weight as possible; (2) the importance of a proper description of goods in order to secure the lowest classification; (3) the need of watching weights, both actual and minimum, and the importance of looking out for miscellaneous devices for reducing freight charges.

The discussion of these points should give the reader a clear idea of how thorough ought to be a shipper's

knowledge of freight matters, and it should also enable the reader to work out for his own line of business a very satisfactory basis for reducing freight charges to a minimum.

The shipper or the receiver of freight should exercise the same diligence in the handling of his traffic that he does in the management of the other departments of his business. The manufacturer when he desires to secure material does not place his order with any firm that he happens to know about in the particular line, but makes careful investigation to see where he can get the material which will best serve his purpose. When bills are received he does not pay them until they have been passed on by those in his employ whose duty it is to know that they are correct. The foregoing pages have clearly demonstrated that there is certainly as much need for care in the handling of freight as in any other branch of business.

In closing, the author wishes to repeat what has already been suggested that it is not intended that information given in this treatise should be considered as "current information." The classification, the tariff, or other publication of the carrier in effect at the time that a shipment moves is the only official source of information. The various examples that have been given will amply serve to show the necessity of studying the traffic problems from all angles. While the rating or rule applicable in connection with some shipment cited in this treatise may have been changed at the time the reader is studying it, he will generally be able to find many matters in his own case that will require a careful study.

TEST QUESTIONS

These questions are for the reader to use in testing his knowledge of the assignment. The answers should be written out, but are not to be sent to the University.

1. In what important ways can freight charges be reduced to a minimum?
2. Name four things which must be considered in packing freight for shipment, and state which is the most important.
3. How can one best learn what style of packing will secure the lowest classification?
4. Give one reason for the practice of placing the same commodity in different classes according to the style of package used.
5. Cite two cases in which the same goods take different rates when in different packages. Cite two cases when the rate is the same irrespective of the style of package.
6. Name three ways, any of which might be used to reduce the bulk of a freight shipment.
7. What do the terms "S. U.," "K. D.," and "Nested" mean? Explain fully.
8. Does the size of a package ever make any difference as to the classification of it?
9. What measures have carriers been compelled to take to protect themselves against undue number of damage claims on certain kinds of shipments which are easily damaged?
10. How can excessive freight charges result from packing more than one commodity in the same package? Are exceptions made on some goods? Mention one example.
11. What is a danger that must be guarded against in shipping old or worn-out articles?
12. Show, by citing a concrete case, why it is especially important to study classifications in packing freight which moves from one classification territory to another.

13. Sum up briefly the discussion of the subject of packing freight to secure the lowest classification.

14. Why is a consideration of the weight of a container important?

15. State eight ways in which it is possible to reduce the dead weight of a shipment.

16. Is it possible to lay down any definite rule for packing all freight shipments? Why?

17. Name the three important classifications and in a general way describe their territories.

18. What tariff publications must be studied in conjunction with the classifications? Why?

19. Is it possible to describe a shipment honestly in more than one way? Illustrate.

20. How should freight be described in the bill of lading?

21. Cite five cases of insufficient description and five cases of improper description.

22. Why is "5 Sacks of Coffee" an insufficient description of a shipment of coffee?

23. Why should shipments not be billed by a mere enumeration of the different parts?

24. Cite a case in which it is absolutely necessary to specify the separate parts of a shipment.

25. When the separate parts of a shipment take different rates, what is necessary in addition to enumerating these parts?

26. Why should abbreviations and ditto marks be avoided in billing freight?

27. Name four classes of returned shipments which take lower rates than when originally shipped.

28. What are three points that must be kept in mind in describing freight for shipment?

29. What bearing has the weight of shipment upon the subject of minimum freight charges?

30. What is the ordinary method of determining the weight of a carload shipment of freight, and why does it permit of error?

31. State three possibilities for overcharge due to excessive weight of a carload shipment.

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32. Explain and illustrate how excessive freight charges may result because of a lack of knowledge of the factor of weight, in addition to those due to excessive actual weights.

33. What effect have the length and the height of a car on freight charges?

34. Explain the third source of overcharge in the weight of a carload shipment.

35. Why is it important to give close attention to amendments to freight tariffs?

36. What is the maximum charge for any less-than-carload lot, and how can this be used to reduce freight charges?

37. What is the best way in which to secure benefit of the sum of two local rates when this is lower than the published through rate?

38. How might excessive charges be assessed on a shipment moving from one point to another when no through rates are published between same?

39. What opportunity for overcharge do mixed carload shipments afford?

40. What is the importance of the exception sheet?