

Strong, Clarence C.

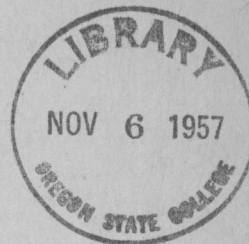
(Senior  
Thesis)

STANDARDIZATION IN THE LUMBER INDUSTRY

By Clarence C. Strong

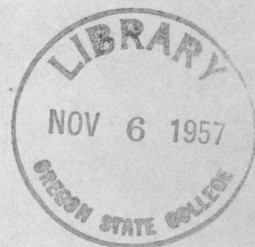
Senior Thesis

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SCHOOL OF FORESTRY  
OREGON STATE COLLEGE  
CORVALLIS, OREGON

"Standardization, conservative and systematic, means maximum obedience to economic law. Its most direct appeal is to the desire for profit which is the motive power of industry. It is the lumber industry's greatest security against the imposition of the wasteful hand of governmental regulation. Lumber standardization is fundamentally the most far-reaching trade extension movement ever undertaken by the lumber trade".



Dr. Wilson Compton, Secretary-Manager,  
National Lumber Manufacturers Association.

SCHOOL OF FORESTRY  
OREGON STATE COLLEGE  
CORVALLIS, OREGON.



## Standardization in the Lumber Industry.

Five hundred years ago the North American continent was blanketed from ocean to ocean with a wealth of timber of value beyond comprehension. Little was then known of the important part which that wealth was to play in the development of a civilization that was to astound the world. So fast has that development come that very few people have stopped to ponder upon the factors which have made possible this standing among the nations of the world.

What do we see today stretching where once lay vast areas of timber? Why was all this waste and desolation necessary? Was it because we were not far-sighted enough to foresee the conditions which are today being driven home with awakening force? Be that as it may, our problem is to deal with conditions as they are. The majority of our timber lands have been stripped to barren wastes and desolation. We have remaining only a remnant of the once vast storehouse of natural wealth. However, it is still not too late to perpetuate that vast source of income, but we must act quickly.

Our problem is to restore our waste lands to productivity and to conserve the supply of timber that we have on hand. There are several ways by which this may be done. It is the purpose of this paper to show that standardization may be applied to eliminate much of the waste which now is common in

all phases of lumber production.

No more conclusive evidence is needed to show that there is a real need for standardization in lumber and building products than the fact that lumbermen and promoters of industry in every corner of our land have been striving, during the past few years, toward a common goal: standardization in all its phases applied to the manufacturing of lumber.

Standardization, in its broader aspect, pertains to sizes, grades, specifications, and nomenclature of wooden products including lumber, cross-ties, and dimension stock. Standardization means, therefore; (1) that the actual as well as the nominal sizes should be uniform for all specified dimensions of the different woods, (2) that the grades within various classes of lumber having similar uses should be uniform for all woods, and, (3) that each wood should have one scientific and one common name.

For our purposes, standardization cannot be defined further than to state that it is the making for uniformity in grading, shipping, manufacturing, and the selling of lumber products. It has both advantages and disadvantages, but the advantages far offset the disadvantages. Standardization, in industrial activity, may be considered under three heads: standardization in the administrative division, in the production division, and standardization in the selling division.

A plan of standardization should attain the following:



(1). A standardized system of trade marking which would include the standard grade-mark and the particular mark of the concern which manufactures it. It should also include the species of wood.

(2). A uniform grade rule which should be applied to all species of like qualities which might be handled under one standard rule. This rule should be standard for the entire country, of course.

(3). The adoption of a standard nomenclature system which would be in effect universally. Under this system, the same name would apply no matter in what part of the country it were used.

(4). A standardized set of dimensions applying to like kinds of lumber.

Standardization is needed to relieve the present chaotic conditions due to the complexity and multiplicity of the present grading rules and specifications under which lumber and wood products are marketed. There are over one hundred species of wood in commercial use, each having its own set of rules. Nearly all grading rules are the outgrowth of early conditions where the use of wood was not refined as it is today. They are so complex that the average citizen has no means of knowing whether or not he is getting the material best suited to his needs.

Under the present system, the consumer is made to suffer. He must place his order often without seeing the product he buys

until delivery. Although he may order what he has used before with satisfaction, the next lot he gets may be far inferior and not suited to the purpose for which it is intended. Suppose he buys a carload of number one common surfaced lumber. The practice in the region where he buys the lumber is to surface to three-quarters of an inch in thickness, all of which is unknown to the buyer. The buyer must have lumber surfaced to thirteen-sixteenths of an inch. The shipment arrives but is too thin for the use intended. Who is the loser? The buyer, because it is the common practice to surface lumber to the thickness shipped and the courts must uphold the manufacturer or shipper. A standard thickness would have eliminated probable litigation and certain loss.

Again, consider it from the standpoint of the competitor. Most of our dealers are honest and are trying to put a product on the market at the least possible cost to the consumer, leaving a fair profit for themselves. However, there are unscrupulous dealers who see an opportunity to put on the market an inferior product at a less price, and yet, a price which will return a large dividend. What is the result? Honest men are forced out of business, and the public is left at the mercy of men who think only of their own profit and have not the interest of the general public at heart. Can we blame the public, then, for becoming suspicious? No, and so long as this practice goes on, there will be growing suspicion on the part of the public



toward lumber dealers. The logical remedy for this condition is to adopt a good system of standards applying to the lumber business and adhere strictly to that system, stricing ever to perfect it.

One of the most important reasons why substitutes have made their way into the building of small homes is the poor service given by lumber dealers. This comes, in many cases, from the selling of an inferior product. Most people prefer wood for construction purposes in the building of homes. However, when wood producers sell them an inferior product, while the next door neighbor buys a better quality at an even lower price, that person will turn to other materials. Perhaps the customer is at fault in many cases due to his ignorance of lumber products, but much of his dissatisfaction is justified.

The man who buys a quantity of lumber and gets a product which satisfies him, should be sure that, when he orders again, he will get the same quality as he received on the first lot. This is the source of the majority of complaints. The daily mails of shippers and producers are full of complaints made on the ground that a shipment did not measure up to a previous one or one from another concern. Maybe it is because entirely different specifications are in effect at the shipping and the receiving points. At any rate, a uniform practice with regard to this phase of the business would materially reduce complaints.

The wide variation between local wholesale prices and distant retail prices are just cause for much concern. The consumer cannot understand why it is necessary for him to pay double or triple the price at the producers plant. There are various factors which influence this condition. Under the present system it is necessary for eastern wholesalers and retailers to buy at distant points. Because of the nonuniform product, they must send buyers out to inspect materials before purchases are made. This adds some to the cost. Again, suppose a purchase is made and shipped but does not meet the requirements of the purchaser thru lack of uniformity in common shipping practices. There follows expensive litigation and maybe lawsuits. The shipment may be a partial or even a total loss. Someone loses; but that loss, no matter who stands it now, is ultimately reflected in the price which the consumer pays.

Thru lack of uniform drying conditions, lumber is shipped in a partially dry state. This overweight greatly increases the freight on the shipment. Again the innocent public pays the bill.

These are a few of the reasons for the seemingly impenetrable gulf between buyers and sellers and the prices which are paid and demanded. Standardization could be relied upon to remove many of these causes and with them the expenses which they entail. It would not be necessary for concerns to keep buyers in the field. The expense of litigation would be avoided.



Extra freight rates would no longer be necessary.

Not only would standardization be a benefit to the consumer but it would be a vast help to the honest dealer thru elimination of cutthroat competition. No longer would it be possible for dishonest dealers to force upon the public their inferior products at the same or a lower price, with its consequent injury to other dealers.

Probably the first thing to be considered is that of a standard system of grading. There are today more than a hundred commercial species in general use and, usually, each is manufactured and graded under its own set of rules. These rules are, in most cases, the outgrowth of early conditions when lumber was not governed by the exacting conditions of today. The result is that lumber grades not only fail to meet the requirements of use, but they are so complex and misleading that the average customer has no assurance that he is getting material best suited to his needs.

There has been enough evidence shown to make it conclusive that a grade should be applied to as many species as possible, and that, even if it is not possible to have grades applying to several species, the basis for such grades should be uniform. Many woods have similar qualities and can be used for the same purposes. There is no good reason why these woods should not be graded under the same rule.

There are several very good reasons why the same rule should

be used. First, it would eliminate an enormous waste growing out of the present plan of grading under a multitude of rules. Much material is bought for a particular purpose and later found to be unsuited, not because of quality, but because of other discrepancies in the grading rules. Second, where there is a standard grade applying to all similar species, the problem of inspection is made easy, and more accurate results may be obtained. At the present time an inspector can operate only on species or in localities where the same or very similar rules apply. He is handicapped, to a large extent, because of the different demands at different plants. At best his territory is limited. With a standardized system of grading, he could operate widely. Concerning a certain species, the same conditions would apply in New York as apply in Oregon.

There are many problems which present themselves in the matter of deciding upon a standard grade. There is the matter of variation in shrinkage and swelling in the different species. Some species have a greater tendency toward degrade both in shipment and in storage. These things must be considered and allowances made for such discrepancies.

The matter of standardizing dimension will, in all probability, be a stumbling block to progress. Most plants and most localities have their own views in the matter of dimensions, and very few are willing to concede to the viewpoint of others. Any change toward standardization along this line may necessitate an



entirely new sawing schedule. It may even necessitate entire changes in the manufacturing methods in some mills. Such changes are difficult to bring about and are always expensive. Consequently, it will require a great deal of diplomacy to get all manufacturers to agree to a standard dimension.

It is firmly believed, however, with the present efforts on the part of the most influential men in the industry, that such a change will not meet so much opposition as might be supposed at first thought. Indeed, it is only within the last month that a compromise has been reached fixing the standard thickness of finish lumber at twenty-five thirty-seconds of an inch and an extra standard thickness at twenty-six thirty-seconds. With such progress already made and the majority of manufacturers and dealers thinking in terms of universal benefits, it may not be difficult to reach an agreement.

Such a standardization of dimensions would make possible a substitution of one species for another. This would be beneficial in many ways. In regions where there is not much competition between species the tendency would be toward a balanced lumber industry.

Under the present system of grades and sizes, the designing of buildings by the architect becomes a difficult problem. His specifications may be made on the basis of sizes and grades common to one species. It may be that those of another species would be entirely unsuited. If there were uniformity as to

size and grade between species which may be used for similar purposes, he could make his plans and specifications and know that they would be practical no matter what species were being used.

A fair and equitable comparison of species, on the basis of the price paid for the different kinds of material, is almost impossible under the present conditions of variable sizes, grades and methods of manufacture. It is not easy to determine which species is the more valuable, because one species may allow greater defects in its grades than other species, or because one may be sized to a thickness of twenty-six thirty-seconds and the other to a thickness of twenty-five thirty-seconds in finish lumber. Of course, these variations do not make possible easy price comparisons.

All the above factors are ones which will do much to make uniform building and construction work possible. With the adoption of more uniform practice will come a smoothing out of the troubles between customers and dealers and between wholesalers and retailers. Such a condition will lead to good will and the public would no longer need to be suspicious.

What applies to other types of lumber also applies to shop grades. The objective, in the standardization of doors, sash, and millwork, is the elimination of the great multiplicity of sizes, patterns, and thicknesses. It is not intended to eliminate individuality in the least, for that would be unfair to



manufacturers who take a pride in their product. Standardization of stock patterns would greatly decrease the cost of producing such material.

Probably there is greater uniformity today, in the matter of grades of shop lumber, than in any other kind of lumber. This applies to thick shop mostly. Shop common varies in many respects from region to region so that there is a wide field open for improvement.

With respect to yard lumber the main objectives should be to bring about standard sizes, standard grades, and standard nomenclature.

With the coming of uniform practice in other branches of the lumber industry must come a standard system of nomenclature and a lumber language which can be understood by all alike. Terms which apply to one section or one species should be discarded and a name substituted which will be national in use. Nothing is more confusing than the practice of making a local name for a product in each section. It leads to confusion and loss in buying, especially when buying is done thru correspondence rather than by a buyer who goes direct to the manufacturer. It leads to difficulty in grading practice and in the training of graders.

Contrary to the more prevalent belief, grade-marking of lumber is a rather old practice. However, it has not been practiced to any extent in the United States and it has not been till very recently that the real need for grade-marking

has been realized.

Grade-marking of lumber is the process of stamping or branding a piece of lumber with a symbol indicating the grade or quality. Those marks very often contain, in addition to the grade-mark, a symbol representing the producer's name, degree of manufacture, and the species of wood. Nearly every important lumber producing country in the world uses this system, but only for export trade.

There are standard ways of applying grade-marks. Each mill has its own apparatus which is usually a rubber stamp. It is necessary to have several different sizes so that a mark proportional to the piece can be placed on each. A few concerns use steel dies which, after being covered with ink, are counter-sunk into the wood by a blow from a mallet. This method is the most satisfactory of all but is more expensive than the others.

The use of the stencil has been resorted to but has not proved satisfactory. The stamp is applied to the end of the piece immediately after final inspection. Women and boys can do the work. The mark is applied to both ends in many cases as an added precaution against dishonest carriers or dealers. Besides end marking, there is the surface marking system. This system, however, has not met with favor.

The principal advantage of grade-marking lumber is the safeguard against any tampering with grades. It has been proved



that grade-marked lumber will sell itself. Some people have criticized European brokers because they charge twice as much commission, in many cases, to sell American manufactured lumber as they do to sell the grade-marked Swedish lumber. This criticism is unjust for the reason that brokers in Europe find it much less expensive to handle the grade-marked lumber, and consequently can handle it at a low commission rate. When the same standard of grades is maintained, year after year, the dealers and importers know that it can be depended upon.

Another advantage of grade-marked lumber is that it is much easier to settle controversies when goods have been grade-marked. The shipper who is desirous of maintaining a good reputation will settle just claims without hesitation. He will be very careful to ship only that grade of material which will pass and give satisfaction. On the other hand, the shipper knows that it will be impossible for an unscrupulous dealer to submit stock as a basis for damage other than that which was shipped.

The shipper of grade-marked lumber obtains a remarkable amount of advertising thru the grade and trade mark. From the time lumber leaves the mill until it is finally consumed, it acts as a silent salesman. Even after being placed in construction, it may be an advertising agent. The natural assumption, among people who grade-mark their product and where grade-marking is common, is that unmarked lumber is so inferior that the manufacturer desires to hide some defects and is not

willing to back up the grade with a guarantee.

Trade-marking has been practiced rather extensively in the United States but there has been only a limited amount of grade-marking. In the shingle industry, we have practices both trade and grade marking with much success. Flooring and some other hardwood products have been handled in this manner by a few manufacturing concerns. The general opinion is that it gives a large amount of advertising where both trade and grade marking are practiced but it is not absolute proof against tampering with grades.

It is not the purpose of this paper to go into detail regarding a suggested plan of standardization. Only the general principles, as they apply to the industry need be considered.

The best that can be hoped for at the present time is to work into our grading system a fair degree of uniformity with respect to sizes, thicknesses, etc. Much opposition will be met because of the varied practices in the different sections of the country. Local demands are influenced by the habits and customs of the people in that locality. It would be necessary to change many local practices in building and other utilization of lumber. To change these practices would mean a slow process of education. In the first place the dealers would have to be educated to the new system so that they, in turn, could carry on the education to the customers.

It is of vital importance to retain the good will of cus-



tomers. To attempt to force upon them, suddenly, a system which would entail such changes, would be disastrous. Customers must be made to see the benefits and the justice to come from such a practice, else the project will not have the support of the people it is designed to benefit, in a large measure. Successful American standards can only be attained thru the heartiest and fullest co-operation of all customers and manufacturers.

Even at best, there will be a good many subdivisions necessary in grading in order that proper allowance be made for including finish stock, softwood and hardwood shop, structural timbers, common lumber, and cut-up stock. This will, however, lessen the necessity for many of the almost unaccountable grades and specifications. It is very plain that it will require a good many grades and specifications, but our problem is to reduce that number to a minimum.

Once a standard system of grading is agreed upon, it will be necessary to perfect an organization which will be both a guide to and a check upon the different manufacturers. This will be brought about by means of a central inspection bureau which, thru its inspectors, will reach even the remotest operation.

All inspectors sent out by the central inspection bureau must be trained alike. They must have a thoroughly grounded knowledge of the fundamentals underlying grading of lumber and the use to which different lumber products are put.

While the basic fundamentals upon which graders are trained

will remain the same, there will be specially trained inspectors for widely varying products such as hardwoods and softwoods. It would be unreasonable to assume that one inspector could work efficiently in all branches of the industry.

Such an inspection bureau will naturally entail a large expense. However, that expense will be born by a vast number of manufacturers and will be very small as compared to the expenses under the present system. There will be no necessity for doing away with the associations as they now exist. But there must be co-operation between these associations to the extent of bringing about this universal inspection service.

The financing will be done as before, by the associations themselves, each contributing in proportion to the services received. Of course, the inspection charges must be born in the end by the individual members and then reflected in the selling price of the product. Naturally, any system which will reduce this charge will be welcomed by both producer and consumer.

Inspection service can be made available to non-members of associations at reasonable charges upon request of such non-members.

There are several factors which make the standardization of dimensions difficult. Where this condition exists, a great deal of difficulty is always met in reaching a common ground of understanding. In the first place, some species shrink and swell more than others both before and after proper seasoning.



This means that some species must be cut thicker than others in order that it may be of the required dimensions when seasoned. Due to the difficulty caused by differences in drying rates, it is not always possible to have lumber dried to a constant moisture content. Under the present system, lumber is often surfaced and finished with a moisture content of twenty-five per cent or more. Since most of the shrinkage occurs in lowering the moisture content below twenty-five per cent, the greatest difficulty will be met from this angle. Suppose that surfacing is done on lumber with a twenty-five per cent moisture content. Further drying then occurs in the air and with it more shrinkage. This, of course, brings the thickness below that required and the piece would not pass inspection. This means a loss. If the inspection were made immediately after surfacing, there would be a shrinkage in transit and by the time of the final inspection the lumber would have shrunk below standard. This all means that there must be drying standards so that lumber will not be surfaced until a required moisture content is reached.

By reducing the moisture content to a standard of fifteen per cent the amount of waste in freight on excess weight can be greatly reduced. There would also be the tendency to prevent some degrade which would result from shipping lumber too wet. This tendency to degrade in transit is considerable in some species and more so when proper methods of drying have not been allowed.

Just as the many dimensions in use are a stumbling block to

progress, so are the varied names by which lumber products are known. Probably no phase of the selling of such products is so clouded with misleading terms as that of nomenclature. There should not be a great deal of difficulty in smoothing out this defect since dealers and manufacturers would not object so strenuously to the adoption of a standard name. In fact, there is a general belief that such a system should be adopted.

In making such a plan, it must be born in mind that the system should be simple and easily put into effect. It must not contain names which will carry serious objections in specific regions where, for some good cause, the standard name could not apply.

The following is a list of names and symbols which could apply generally:

Symbol	Name
A. D. F.	After deducting freight.
A. W. and L.	All widths and all lengths.
B / L.	Bill of lading.
B. F.	Board foot.
B. M.	Board measure.
C. I. F.	Cost, insurance, and freight.
C. I. F. E.	Cost, insurance, freight, and exchange.
C. M.	Center matched.
E / B.	Expense bill
D and H.	Dressed and headed.



D and M.	Dressed and matched boards.
D / S.	Drop siding.
D 2 S and M.	Dressed two sides and matched.
E and C V I S.	Edge and center v one sides.
E and C V 2 S.	Edge and center v two sides.
E and C B 2 S.	Edge and center bead two sides.
E and C B I S.	Edge and center bead I side.
E. G.	Edge grain.
E. M.	End matched .
F. A. S.	Firsts and seconds.
F. G.	Flat grain.
F. O. B.	Free on board.
I S M.	Inside measure.
K. D.	Kiln dried and knock down.
M. L.	Mixed lengths.
M. W.	Mixed widths.
R. L.	Random lengths.
R. W.	Random widths.
O. G.	Oval groove.
P 2 S and M.	Planed 2 sides and matched same.
S I S I E.	Surfaced one side and one edge.
S M.	Surface measure.
S4 S, C. S.	Surfaced on four sides in the one- sixteenth inch caulking seam on each edge.
S 3 S and C M.	Surfaced two sides and center matched.

S I S.	Surfaced one side.
S 2 S.	Surfaced two sides.
S4 S.	Surfaced four sides.
S. G.	Slash or flat grain.
SHLP or S / L.	Shiplap.
T. and G.	Tongued and grooved.
T. B. and s.	Top, bottom, and sides.
V. G.	Vertical grain.
S. A. L .	Wider, all lengths.
W. W.	Water white.
5/4	One and one-quarter inches.
6/4	One and one-half inches.
8/4	Two inches.

Not only should there be uniformity as to the terms but there should be a lesser variation in kinds of invoices, bills of lading, etc. Such a change need in no way affect the individuality of any paper of document.

#### Recommendations on Grade Marking.

The following recommendations were made by the manufacturer's standardization committee which met in Chicago on February 21 and 22 of this year:

(1). It is recommended that the grade be placed on number two common and better, and that it be left optional whether or not the grade be placed on lower grade material. All pieces must be marked.

(2). The grade mark of association mills shall include the



name of the association under whose rules the lumber is graded. This will insure proper inspection, because each association would want to have it's product the best.

(3). The insignia used in applying the mark shall be uniform in each association.

(4). Each mark should contain the manufacturers' insignia so that the identification of the mill manufacturing it can be known. This would tend to insure a good product by the manufacturer, because he could not afford to place an inferior product on the market.

(5). An appropriate mark symbolizing American standards should be copyrighted and its use limited to those mills which agree to maintain the adopted standards.

One of the best methods of judging the merits of a system of grade and trade marking is by the careful study and careful analysis of the influence on the industry of such of the large manufacturing concerns as have been grade-and trade-marking their product for a long time. There are comparatively few of these concerns, but such as there are have met with much success.

Only since the advent into the northwest of such companies have we been made to feel the effect of the force which they will exert upon the industry toward standardization. Because of their long experience in a region where competition in marketing has been keen, they turn out a product which approaches perfection. Will such products on our market have any appreciable effect?

Certainly they will and the effect will be far-reaching. Other manufacturers will have to better their products in order to compete, and there will be a general tendency toward stabilized market conditions.

### History of the Standardization Movement.

For our purposes it will not be necessary to delve into the past history and development of the standardization movement in order to pick out the early efforts in the line of attempts at standardization. We need only consider the happenings of the past few months to get at the main facts in which we are most interested.

Of course, there has been more or less agitation in certain instances for many years, but only during the past few months has the program been crystallized into concrete form.

We shall begin with the meeting of October 31, 1923, of the central committee on lumber standards. Recommendations were made at this meeting concerning standard lumber classifications, standard grade names and classifications, standard yard lumber sizes, methods of lumber measurements, standard shipping weights, and standard shipping practices.

Under lumber classifications, lumber will be classified by its principal uses into yard lumber, structural timbers, and shop or factory lumber.

Lumber that is less than six inches in thickness and is intended for general building purposes is yard lumber. Yard lumber will be further divided into strips, boards, and dimension.



Dimension will include planks, scantlings, and heavy joists.

The grading will be based on the entire piece. Structural timbers will include lumber six inches and larger in least dimension.

Summary of Basic Grade Classifications for Yard Lumber.

Total products of a typical log arranged in series according to quality as determined by appearance.

A. Select. Lumber of good appearance and finishing qualities.

I. Suitable for natural finishes.

a. Grade A. Practically free from defects.

b. Grade B. Allows a few small defects or blemishes.

2. Suitable for paint finishes.

a. Grade C. Allows a limited number of small defects or blemishes that can be covered with paint.

b. Grade D. Allows any number of defects or blemishes which do not detract from the finish appearance of the piece.

B. Common. Lumber containing defects or blemishes which detract from a finish appearance but which is suitable for general utility and construction purposes.

I. Lumber suitable for use without waste.

a. No. 1. common. Sound and tight-knotted stock. Size of defects and blemishes limited. May be considered water tight lumber.

b. No 2. common. Allows large and coarse defects.

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May be considered grain tight lumber.

2. Lumber permitting waste.

- a. No. 3. common. Allows larger and coarser defects than No. 2 and occasionally knotholes.
- b. No. 4. common. Low quality lumber allowing coarsest defects such as rot and knotholes.
- c. No. 5. common. Must hold together under ordinary handling.

To a large extent the standardization committee owes its information as to basic recommendations to the Forest Products Laboratory at Madison, Wisconsin. For many years the laboratory has carried on research work along lines that have placed them in an unequalled advisory capacity. It was because of such available information that the committee was able so quickly to reach an agreement.

Following the October meeting, a national manufacturer's committee met in Chicago on January 21 and 22 to further the work of the national conference held in Washington, D. C., in December. Another meeting will be held on March 20 to 22, after which it is hoped that the matter will be in shape to present at a general conference to be called in Washington, D. C., by the Departments of Commerce and Agriculture.

At the Chicago meeting, basic grades, defects, and definitions were discussed at length, but finally it was decided to get the opinions of each association as to interpretations, defects, etc.



Naturally the manufacturers are interested in getting the public to use shorter lengths.

Recommendations of the Consulting Committee.

(1). The minimum rough dry thickness shall be twenty-nine thirty-seconds with provision for an extra standard rough dry thickness of thirty-thirty-seconds.

(2). Tally sheets shall be placed in each car at the point of shipment showing the tally piece by piece.

(3). The following standard lengths were adopted: Finish shall run from six to twenty feet. Flooring, partition, and siding shall run from four to twenty feet. Boards and dimension shall run from six to twenty feet.

William A. Durgin of the Department of Commerce has this to say about the standardization movement:

"The word standardization has come to have a most unfortunate sound to all except the engineer who sees in it its true relation to economy. No sooner do we hear the word than we begin to think of a world in which we shall live in identical houses, fronting upon reticulated sidewalks ornamented by rigidly uniform shade trees,-- a world where the Rolls-Royce and the Ford differ only in dimensions,--where we shall walk and dress with identity. Moreover, when people hear of governmental activity in standardization, they see in us the guise of policemen wielding a heavy club over the unwary and enforcing acceptance of standardized decrees.

We must get away from this idea. We must recognize in the system one having for its purpose, permanently, the benefit of

of the mass of people. Its purpose is not to eliminate individuality but rather to encourage it.

With fifteen to twenty trade names for each species, it is readily seen that from fourteen to nineteen groups must voluntarily give up their own prized trade name in favor of one.

Simple trade and grade names mean concessions; but if these concessions will help in the end, there should be no serious objections. We can learn a new system in much less time than the old ones; while the customer will find it possible to get a clear conception of what was always a maze of confusion."

In conclusion, we must not overlook the fact that there are doubters who cannot see the merits of the system. There are also those who object to the methods used in bringing about standardization. To these we must point out that perfection is reached only by a slow process. The fact that a foundation, imperfect as it is, has been laid, ought to be a spur to our efforts today, imperfection of an institution which will greatly affect our economic being, tomorrow.



Statement by the Secretary of Commerce at the  
Conclusion of the Conference on Standardization.

"The lumber industry and the wood consuming public are to be congratulated upon the forward step taken today. This establishes the basis from which the standardization program can proceed, step by step, in a way that will affect economies in construction, conserve a great natural resource, and protect the interests of the home builders of the nation. The fact that various branches of the industry have found a way to compare their differences and voluntarily agree on this constructive program is the best evidence of their sincerity in this movement for the protection of the public and the conservation of one of our country's largest industries. I am glad to pledge the continued hearty co-operation of the Department of Commerce and to urge every branch of industry and the people generally, to support this program.

--Herbert Hoover--