

U. S. DEPARTMENT OF COMMERCE
BUREAU OF STANDARDS

HICKORY GOLF SHAFTS

COMMERCIAL STANDARD CS18-29



ELIMINATION OF WASTE
Through
SIMPLIFIED COMMERCIAL PRACTICE

Below are described some of the series of publications of the Department of Commerce which deal with various phases of waste elimination.

Simplified Practice Recommendations.

These present in detail the development of programs to eliminate unnecessary variety in sizes, dimensions, styles, and types of over 100 commodities. They also contain lists of associations and individuals who have indicated their intention to adhere to the recommendations. These simplified schedules, as formulated and approved by the industries, are indorsed by the Department of Commerce.

Commercial Standards.

These are developed by various industries under a procedure similar to that of simplified practice recommendations. They are, however, primarily concerned with considerations of grade, quality, and such other characteristics as are outside the scope of dimensional simplification.

American Marine Standards.

These are promulgated by the American Marine Standards Committee, which is controlled by the marine industry and administered as a unit of the division of simplified practice. Their object is to promote economy in construction, equipment, maintenance, and operation of ships. In general, they provide for simplification and improvement of design, interchangeability of parts, and minimum requisites of quality for efficient and safe operation.

Lists of the publications in each of the above series can be obtained by applying to the Bureau of Standards, Washington, D. C.

U. S. DEPARTMENT OF COMMERCE

R. P. LAMONT, Secretary

BUREAU OF STANDARDS

GEORGE K. BURGESS, Director

HICKORY GOLF[®] SHAFTS

COMMERCIAL STANDARD CS18-29

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COMMERCIAL STANDARD CS18-29

ACCEPTORS

FIRMS

Bassett Hardwood Manufacturing Co.,
Monticello, Ky.
Buhrke Co., R. H., Chicago, Ill.
Burke Golf Co., The, Newark, Ohio.
Campbell (Inc.), M. R., Tullahoma,
Tenn.
Carolina Golf Shaft Co., Asheville,
N. C.
Crawford, McGregor & Canby Co.,
Dayton, Ohio.
Cumberland Hickory Co., Nashville,
Tenn.
Dayton Handle & Golf Co., The,
Dayton, Ohio.
Farebrother & Beisert, Rye, N. Y.
Goldsmith Sons Co., The P., Cincin-
nati, Ohio.
Golf Shaft & Block Co., Memphis,
Tenn.
Great Lakes Golf Corporation, Mil-
waukee, Wis.
Hillerich & Bradsby Co., Louisville,
Ky.
Hunter, Willie (golf professional),
Montebello, Calif.
Kroydon Co., The, Maplewood, N. J.

McMinn, W. W., Harrison, Ark.
Minton & Co. (Inc.), T. W., Barbour-
ville, Ky.
Pioneer Pole & Shaft Co., The, Mem-
phis, Tenn.
Rawlings Manufacturing Co., St. Louis,
Mo.
Reach, Wright & Ditson, A. J., New
York, N. Y.
Runyan, Paul (golf professional), Little
Rock, Ark.
Sears, Roebuck & Co., Chicago, Ill.
Spalding & Bros., A. G., Chicopee,
Mass.
Vulcan Corporation, Portsmouth, Ohio.
Wanamaker, John, wholesale golf de-
partment, New York, N. Y.
Wilson Western Sporting Goods Co.,
Chicago, Ill.
Young Co., The L. A., Detroit, Mich.

GOVERNMENT

Department of Labor, Washington,
D. C.
Federal Specifications Board, Washing-
ton, D. C. (in principle).

HICKORY GOLF SHAFTS

COMMERCIAL STANDARD CS18-29

On June 14, 1929, a joint conference of representative manufacturers, users, and general interests recommended a commercial standard for hickory golf shafts. The industry has since accepted and approved for promulgation by the Department of Commerce the specification as shown herein.

The commercial standard is effective from November 1, 1929.

Promulgation recommended.

I. J. FAIRCHILD,
Chief, Division of Trade Standards.

Promulgated.

GEORGE K. BURGESS,
Director, Bureau of Standards.

APPROVED.

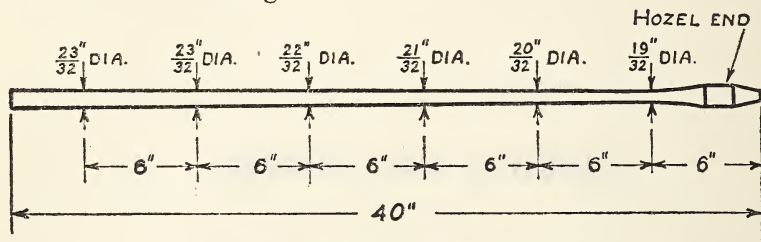
R. P. LAMONT,
Secretary of Commerce.

COMMERCIAL STANDARD CS18-29

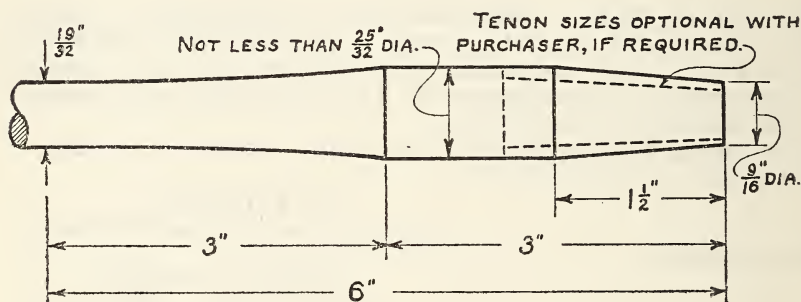
I. SCOPE

1. The specification herein given is for semifinished hickory golf shafts, known in the trade as "B" form shafts for iron-headed clubs. It covers:

1. Size and general requirements for quality.
2. Grades based on a mechanical test.
3. Methods of testing.



SIZE OF "B" FORM SHAFTS.



DETAILS OF HOSEL END OF "B" FORM SHAFTS.

FIGURE 1.—Commercial standard size and pattern "B" form shafts for iron headed clubs

II. MATERIAL AND WORKMANSHIP

2. All shafts shall be made from tough, resilient, high-grade hickory that is free from knots, checks, wormholes, and other injurious defects. They shall be smooth, clean, and of good workmanship.

III. DETAIL REQUIREMENTS

3. *Dowels.*—Dowels shall be turned from straight-grain "squares" to a cylindrical form which, when seasoned to a fully air-dried condition of approximately 15 per cent moisture content, shall be not less than fifteen-sixteenths inch in diameter.

4. *Shafts.*—Shafts shall be turned from dowels that have been thoroughly seasoned to a moisture content of not less than 5 per cent and not more than 10 per cent, based on the dry weight of the wood, and averaging approximately 8 per cent and shall conform to the dimensions shown in Figure 1.

5. *Tolerances.*—A plus tolerance of one sixty-fourth inch in diameter will be allowed in not more than 25 per cent of the shafts of a given lot while a minus tolerance of one sixty-fourth inch will be allowed in any number.

6. *Straightness.*—The axis of the shaft shall at no place in its length be more than one-fourth inch from a straight line connecting the axis at the grip end with the axis at the smallest diameter.

7. *Grain.*—"Goose," "Owl," and "Lark" grade shafts shall be reasonably straight-grained for at least 20 inches from the hozel end.

8. *Stiffness.*—Shafts shall be graded in accordance with Table 1.

TABLE 1.—Standard grades of hickory shafts for iron clubs

Grade	Minimum load (in pounds)
Goose (G)-----	40 and over.
Owl (O)-----	34 to 39 inclusive.
Lark (L)-----	28 to 33 inclusive.
Falcon (F)-----	Below 28.

9. *Average quality.*—Customers' orders in each commercial standard grade shall contain shafts having the following proportion of actual loads unless otherwise agreed upon between buyer and seller.

Grade	Actual load (pounds)	Proportion within grade (per cent)
"Goose"-----	40-43-----	Not more than 40.
	44-46-----	Not less than 45.
	47 and over-----	Not less than 15.
"Owl"-----	34-36-----	Not more than 50.
	37-39-----	Not less than 50.
	28-30-----	Not more than 50.
"Lark"-----	31-33-----	Not less than 50.

IV. METHODS OF TESTING

10. *Size.*—Before grading, the diameters of all shafts shall be measured with steel snap gages.

11. *Grades.*—For grading shafts the machine shown in Figures 2 and 3 or its equivalent shall be used. The shaft is placed across the fulcrum with its hozel end under the stationary hook and the handle end resting free beneath the sliding hook which is moved downward by foot or hand power engaging the shaft and bending it until it comes in contact with a stop block. The load indicated by the scale is the actual load on the shaft. Fractions of a pound shall be disregarded in determining the grade so that the observer uses the nearest whole number below the load actually indicated. The shaft shall be so placed that the growth rings are vertical, and after testing in one direction the shaft shall be rotated 180° and again tested, the lower reading of the two shall be used for grading.

12. *Testing machine.*—The testing machine, as shown in Figures 2 and 3, consists of two hooks and a fulcrum block which is secured to the platform of a self-indicating scale, such as the Toledo style 850F of 100-pound capacity or its equivalent, the full downward platform movement of which shall equal nine thirty-seconds inch with a tolerance of plus or minus one thirty-second inch. The bench on which

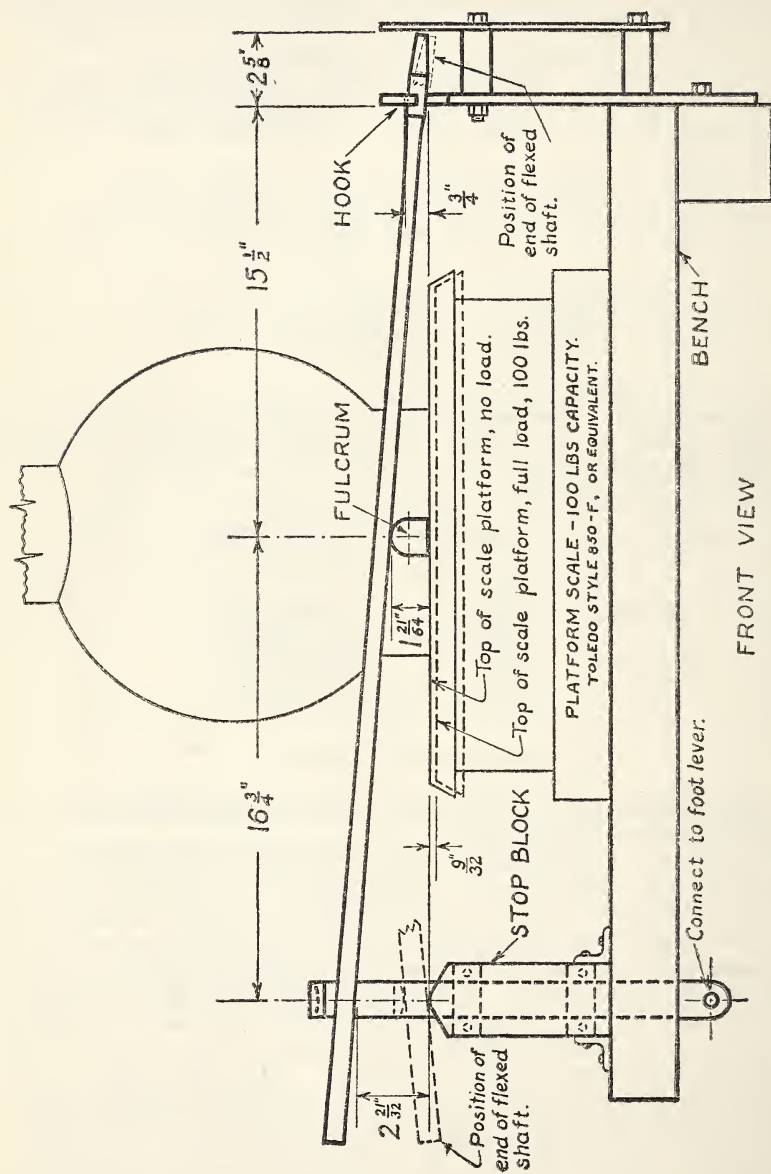


FIGURE 2.—Machine for mechanical grading of golf shafts
Assembly

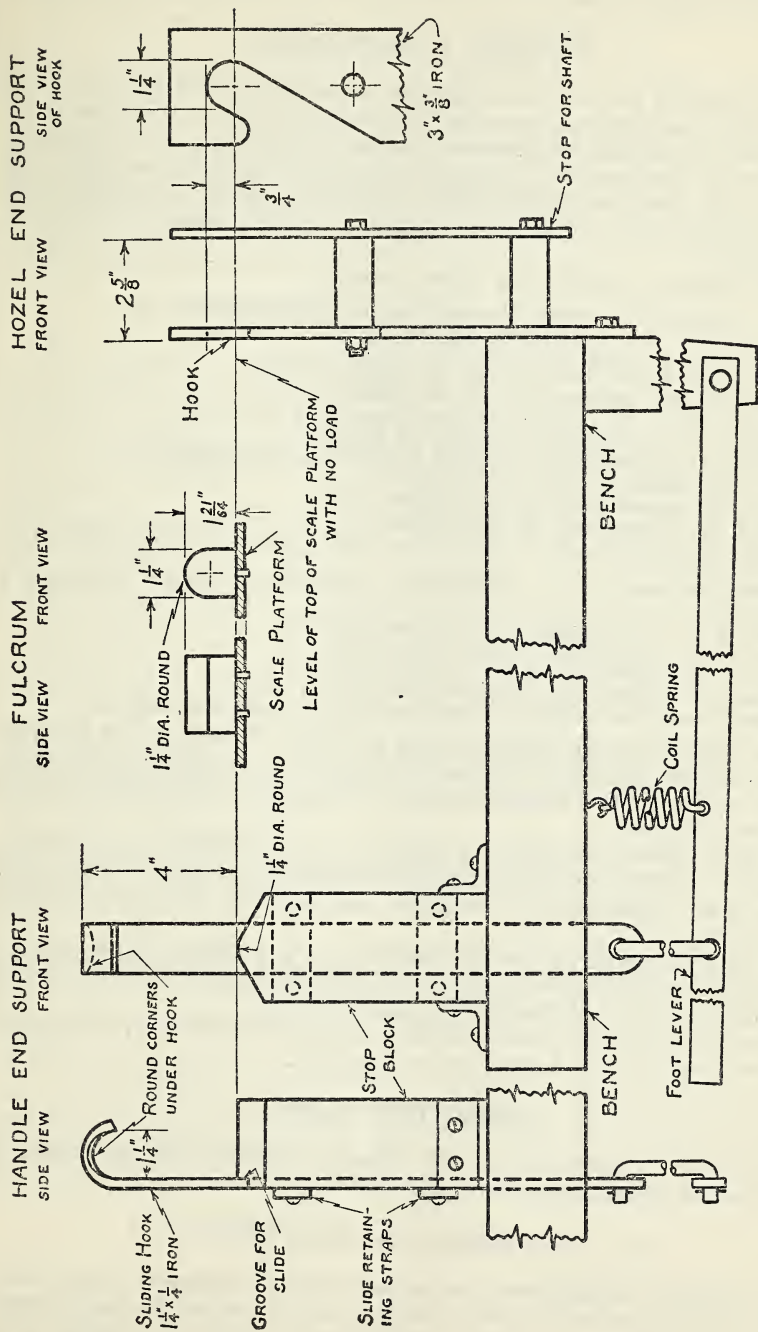


FIGURE 3.—Machine for mechanical grading of golf shafts

Details of supports

the machine is mounted shall be sufficiently strong so that the deflection at its center, when the scale is fully loaded, shall not exceed 0.002 inch.

GENERAL CONFERENCE

Pursuant to a request from the joint committee of the Hickory Golf Shaft Manufacturers Association and the Golf Club Manufacturers Association a general conference of golf shaft and club manufacturers, distributors, and others generally interested was held on June 14, 1929, at the Deshler-Wallick Hotel, Columbus, Ohio, to consider the establishment of a commercial standard defining grades of hickory golf shafts.

The following individuals were present:

BASSETT, GEORGE O., owner, Bassett Hardware Manufacturing Co.
BRATT, HARRY C., vice president, Dayton Handle & Golf Co.
BUSH, GEORGE A., president, Bush Bros. & Co.
CAMPBELL, M. R., Jr., president, M. R. Campbell (Inc.).
CRANDALL, L. W., president, The Burke Golf Co.
CUSTENBORDER, C. W., superintendent, Vulcan Golf Co.
DICKINSON, R. E., president, Golf Shaft & Block Co.
JANSKY, C. G., superintendent, Wilson Western Sporting Goods Co.
LINK, A. C., vice president L. A. Young Co.
LYON, N. C., manager, Cumberland Hickory Co.
McMINN, W. A., manager, W. W. McMinn.
MATTERN, GEORGE W., sales manager and vice president, Crawford, McGregor & Canby Co.
MATTERN, GEORGE C., Jr., engineering department, Crawford, McGregor & Canby Co.
MINTON, R. B., vice president, T. W. Minton & Co.
RICKEY, C. H., vice president, R. H. Buhrke Co.
STAGGS, F. M., superintendent, Bush Bros. & Co.
TURNER, ALEXANDER, plant manager, The Burke Golf Co.
STEIDLE, HARRY H., division of trade standards, Bureau of Standards.

The conference was presided over by Harry H. Steidle, of the division of trade standards, Bureau of Standards, Department of Commerce, while L. W. Crandall outlined the need for standard grades of hickory golf shafts.

Several minor changes were made in the specification as proposed and upon motion by L. W. Crandall, seconded by George C. Mattern, the altered commercial standard specification was unanimously approved.

A stiffness testing device was installed for a practical demonstration of mechanical testing which indicated the simplicity and effectiveness of testing hickory golf shafts by this method.

The conference recommended that all shafts should be grade marked and accompanied by a certificate of quality.

EFFECTIVE DATE

November 1, 1929, became the effective date for new production of commercial standard hickory golf shafts.

STANDING COMMITTEE

A standing committee was appointed to represent the various phases of the industry and to receive all comments and suggestions for the improvement of the specification. At the expiration of six months from the date on which the standards become effective, the

standing committee will meet to consider what changes, if any, shall be made.

The standing committee consists of the following:

L. W. CRANDALL, The Burke Golf Co., Newark, Ohio.
GEORGE C. MATTERN, Crawford McGregor, & Canby Co., Dayton, Ohio.
A. C. LINK, L. A. Young Co., Detroit, Mich.
WILLIAM CASON, N. C. Blanchard Co., Chattanooga, Tenn.
M. R. CAMPBELL, Jr., M. R. Campbell (Inc.), Tullahoma, Tenn.
N. C. LYON, Cumberland Hickory Co., Nashville, Tenn.
ALEX PIRIE, Old Elm Country Club, Ft. Sheridan, Ill.
GENE SARAZEN, Fresh Meadow Country Club, Flushing, Long Island, N. Y.
LOUIS SCOTT, Hillcrest Country Club, Los Angeles, Calif.
JOHN ANDERSON, John Wanamaker, New York, N. Y.
HARRY HUGHES, Olympic Stores (Inc.), New York, N. Y.

CERTIFICATION PLAN

The conference voted its approval of the certification plan to be used on hickory golf shafts made in accordance with the commercial standard specification. The certification plan as applied by the Bureau of Standards to commercial standards consists in the compilation and distribution of lists of manufacturers who are willing, when requested to do so, to certify to purchasers that products supplied by them comply with all the requirements and tests set forth in nationally recognized commercial standards. The plan is also applied to selected Federal specifications. These lists are available on request to individual consumers, consumer groups, companies, and, in fact, to any prospective purchasers for their guidance.

The benefits now derived from the use of specifications by large consumers are thus made immediately available to the small consumer, with incidental advantage to the larger consumers of convenience in ordering and accepting material with fewer laboratory tests, and of lowering the price by reason of broadening the field of supply. The manufacturer also benefits from the well-known economies accompanying "mass production."

The lists of manufacturers "willing to certify" to the quality of certain commodities are made by corresponding with, as nearly as possible, all the manufacturers of that product and listing only those who signify their willingness to certify to the purchaser, when requested to do so, that the commodities delivered actually comply with the commercial standard. Obviously, the purchaser making use of the lists of "willing-to-certify" manufacturers will select therefrom such manufacturers as are known (or assumed) by him to be reliable.

The trend toward the purchase of materials of certified quality from sources shown on such willing to certify lists supplies added incentive to standardization on the part of other producers, and thus the benefits of the certification plan will be felt by purchasers either directly or indirectly, whether or not they make use of the plan themselves.

COMMERCIAL STANDARDS SERVICE

Industry has long sensed the need for a wider application and use of specifications developed and approved by nationally recognized organizations. To assist these bodies and the producers and consumers in securing this result and as a natural outgrowth of the move-

ment toward elimination of waste through simplified practice, the Bureau of Standards has set up a procedure under which specifications, properly indorsed, may be printed as official publications of the Department of Commerce and promulgated as "commercial standards." This service parallels that of simplified practice in many respects and is available only upon request.

Broadly speaking, the aim is to continue the same character of cooperative service in this field that is being rendered in simplification. The division of trade standards is not designed to act as a standardizing body, nor will it engage in the preparation of specifications. Its service is mainly promotional in character, since its chief mission is to get behind a standard or a specification which any branch of industry may want to promulgate on a nation-wide basis; to determine its eligibility for promulgation; to publish and broadcast it in the event the prerequisites of procedure have been met, including a satisfactory majority acceptance; to facilitate the application of the certification plan for the assurance and convenience of the purchaser; to provide means for periodic audits of adherence; and to cooperate with the Bureau of Foreign and Domestic Commerce in determining the desire of industry relative to translation and promulgation of such specifications as a basis for foreign commerce.

In general, it may be said that a simplification covers types, sizes, and varieties of a commodity which are retained by industry on the basis of demand, whereas a commercial standard establishes definite requirements as to grade, quality, or dimensional tolerances in addition to any limitation of variety desired and accepted by the industry.

ORGANIZATION AND DUTIES OF STANDING COMMITTEE

In order to carry on the aims and desires of the industry in the standardization of their product, a standing committee is appointed at the general conference. This committee consists of members from each division of the industry, namely, producers, distributors, and consumers, and thus reflects the well-balanced viewpoint of all concerned. The members of the committee receive all suggestions regarding the commercial standard and consider its revision in the event that such action is desirable and mutually beneficial. If the commercial standard does not warrant revision it is reaffirmed in its existing form, but if any important changes are found desirable, their adoption is recommended by the committee, whereupon the industry is again solicited for written acceptance of the standard in its revised form.

The committee is in effect a centralizing agency for criticisms and comments regarding the commercial standard and is charged with the responsibility of recommending revisions to keep the standard abreast with current industrial practice. The proper functioning of the committee requires that, when necessary, its members be willing to attend meetings held at some central place, although in many cases it will be possible to conduct the work by correspondence.

When any deceptions in reference to the commercial standard are reported to the standing committee, it applies moral suasion or such other corrective measures as seem desirable. The Department of Commerce has no "police power" to compel adherence; therefore, it is incumbent upon the standing committee to do all in its power to

encourage all divisions of the industry to follow the provisions of the commercial standard and contribute in every way possible to its general adoption and usefulness.

YOUR COOPERATION

As a producer, distributor, or consumer of some of the commodities for which commercial standards have already been established, you are in a position to avail yourself of the benefits arising from the use of quality standards and incidentally to add impetus to this method of eliminating waste. The first step is a declaration in favor of the standard by recording your intention to adhere, as closely as circumstances will allow, to the standards for those products which you may buy or sell. The receipt of your signed acceptance will permit the listing of your company in new editions of the commercial standards that you accept.

You will, of course, want to examine any commercial standards before signing a formal acceptance. The Bureau of Standards will therefore furnish a copy of any standard under consideration for acceptance. To facilitate this procedure, a list appears on page 14 that may be checked and mailed to the division of trade standards, Bureau of Standards, Washington, D. C. The publications may also be secured singly or in quantities at a nominal price from the Government Printing Office. Prices will be furnished upon request.

The acceptance of a commercial standard is an entirely voluntary action and applies to the production, sale, and use of stock items. It is not meant to interfere with the manufacture or sale of special sizes and types sometimes required. Trade associations and individual companies often distribute large numbers of the printed standard for the information and guidance of their members or customers. In such cases it is possible to extend the scope and degree of adherence by urging each recipient to send in an acceptance, bearing in mind that the practical value of any standardization is measured by the observance it receives.

An acceptance form for the commercial standard herein covered is included on page 11.

ACCEPTANCE OF COMMERCIAL STANDARD

Please sign and return this sheet to division of trade standards, Bureau of Standards, Washington, D. C.

Date -----

DIVISION OF TRADE STANDARDS,
BUREAU OF STANDARDS,
Washington, D. C.

GENTLEMEN: We, the undersigned, do hereby accept the original draft of the commercial standard, as our standard practice in the {Production¹
Distribution¹} of hickory golf shafts, beginning -----, and will use our best effort in securing its general adoption.
(Date)

To permit intelligent review of the effectiveness of the commercial standard every year by an accredited committee of all interests, working in cooperation with the Department of Commerce, we plan to supply all data, upon request, which may be necessary for the development of constructive revisions. It is understood that any suggested modifications will be submitted as soon as formulated, and shall not be promulgated until accepted in form similar to this recommendation.

Signed -----
(Kindly typewrite or print the following lines)

Title -----

Company -----

Street address -----

City and State -----

We are members of the following associations or other organizations interested in the production, sale, or use of hickory golf shafts:

¹ Please designate which group you represent by drawing lines through the other two. In the case of related interests, trade papers, colleges, etc., desiring to record their general approval, the words "in principle" should be added after the signature.

TO THE ACCEPTOR

In signing the acceptance blank, please bear the following points clearly in mind:

1. *Adherence.*—The Department of Commerce has no regulatory powers to enforce adherence to the commercial standards. Instead, this waste-elimination program is based on voluntary cooperation and self-government in industry. To make this specific standardization operate as a satisfactory example of self-government, it is highly desirable that it be kept distinct from any plan or method of governmental regulation or control. It will be successful according to the degree to which manufacturers, distributors, and purchasers adhere to its terms and conditions.

2. *The industry's responsibility.*—The department cooperates only on the request of the industry and assumes no responsibility for industrial acceptance or adherence. This program was developed by the industry on its own initiative. Its success depends wholly on the active cooperation of those concerned.

3. *The acceptor's responsibility.*—You are entering into an entirely voluntary arrangement, whereby the members of the industry—the distributors and consumers of the product, and others concerned—hope to secure the benefits inherent in commercial standardization. Those responsible for this standard realize that instances may occur in which it will be necessary to supply or purchase items not included therein. The purpose is, however, to secure wider support for nationally recognized standards covering grade, quality, and other characteristics of products. Consumers can make the program a success if, in their purchasing, they will make a definite and conscientious effort to specify in terms of this commercial standard.

4. *The department's responsibility.*—The function performed by the Department of Commerce is fourfold: First, to provide a neutral agency which will insure adequate consideration of the needs of all interests; second, to supply such assistance and advice in the development of this program as past experience with similar programs may suggest; third, to solicit and record the extent of adoption and adherence to the standard; and fourth, to add all possible prestige to this standardization movement by publication and promulgation if and when it is adopted and accepted by all elements directly concerned.

REQUEST FOR COMMERCIAL STANDARDS

Date

DIVISIONS OF TRADE STANDARDS,
BUREAU OF STANDARDS,
Washington, D. C.

DEAR SIR: The undersigned wishes to examine the commercial standards checked on the reverse side of this page, with a view toward accepting them as our standard of practice in the production, distribution, or consumption of the standardized lines.

Signed.....
(Kindly typewrite or print the following lines)

Title.....

Company.....

Street address.....

City and State.....

COMMERCIAL STANDARDS

CS. No.	Item	Cs. No.	Item
1-28.	Clinical thermometers.	12-29.	Domestic and industrial fuel oils.
2-29.	Surgical gauze (preparation postponed).	13-30.	Dress patterns.
3-23.	Stoddard solvent.	14-29.	Boys' blouses, waists, shirts, and junior shirts (in preparation).
4-29.	Staple porcelain (all-clay) plumbing fixtures.	15-29.	Men's pajamas.
5-29.	Steel pipe nipples.	16-29.	Wallpaper.
6-29.	Wrought-iron pipe nipples.	17-30.	Diamond core drill fittings.
7-29.	Standard weight malleable iron or steel screwed unions.	18-29.	Hickory golf shafts.
8-29.	Plain and thread plug and ring gage blanks (in preparation).	19-29.	Foundry patterns of wood.
9-29.	Builders' template hardware.	20-30.	Staple vitreous china plumbing fixtures.
10-29.	Brass pipe nipples.	21-	Interchangeable ground glass joints (in preparation).
11-29.	Regain of mercerized cotton yarns.	22-	Builders' hardware (nontemplate) (in preparation).





