## Part IX.

Specifications, Blank Forms, Etc.

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# Specifications, Blank Forms, &c.

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### Section 1.

## Hardware Specifications.

HE scope of this volume embraces no purpose of greater importance than the promotion of effective methods of selecting, specifying and purchasing the Hardware of Ornament, commonly called "Finishing Hardware."

Formerly, when Hardware involved no element of taste, still less of art, and was purely mechanical, its selection could safely be left to the contractor or builder, and specifications usually covered little more than a mere statement that the necessary hardware should be furnished and should be of good quality. The revolution accomplished in recent years, however, in the designing and making of Builders' Hardware, which has elevated it to an important place in the field of decorative art, and simultaneously created new and higher mechanical grades, has radically changed the requirements in specifications relating to this subject.

Unfortunately the scope and significance of this change are as yet not generally realized, and many hardware specifications are still drawn on the old lines, with the effect that the desired result is not realized. Doubtless this is chiefly due to want of technical information on the subject, and the purpose of what follows, combined with the information contained elsewhere in this volume, is to supply that want. If the information and suggestions herein contained are availed of, the Architect will save himself much annoyance and disappointment, the contractor and builder will be enabled to estimate intelligently, and the client or owner will obtain what he desires and what he pays for.

The segregation of the Hardware of Ornament from the Hardware of Construction has given rise to several distinct methods Each of them presupposes that the Hardware of Construction, such as nails, screws, sash pulleys, chains and weights, etc., and also usually sliding door hangers and rail, are all covered by the general specifications, and that only "Finishing Hardware," i. e. the Hardware of Ornament, inclusive of locks and fastenings, is covered by the separate hardware specifications.

The several plans most commonly availed of will be stated in their order of merit, and on pages 1001 to 1011 will be found a series of "forms" suggestive of the manner in which the subject of Builders' Hardware should be covered in specifications under each of these several plans.

#### PLAN 1. HARDWARE RESERVED.

Under this plan the Finishing Hardware is omitted from the general specifications, and reserved for selection by the architect or owner, under stipulation that it shall be supplied at the times and in the quantities needed by the contractor, and that the latter shall properly fit and apply it. Where this plan is adopted Form I (page 1001) should be introduced into the general contract.

### PLAN 2. HARDWARE SPECIFIED DEFINITELY.

Under this plan the Finishing Hardware is *included* in the general specifications, but on the basis of a careful selection in advance by the architect or owner, and of a description more or less detailed, based on such selection, contained in the general specifications. Where this plan is adopted Form 2 (page 1002) should be introduced into the general contract. Such description may be given by either of the following methods, viz.:

Method A. By name of maker and by actual catalogue number, or other equivalent exact description. (See Schedule A, page 1003); or by

Method B. By general description, covering sizes, weights, metals and finishes, but omitting makers' name and list numbers. (See Schedule B, page 1007); or by

Method C. By reference to samples on file with the Architect. (See Schedule C, page 1009).

By either of these methods all important questions concerning the Finishing Hardware are removed from the field of controversy among rival contestants for the business, but without implying any restriction of competition to insure the purchase of the selected goods at the lowest market prices. Each manufacturer has established prices for his products, which are widely known to hardware dealers, and competition among the latter can safely be relied on to guard against any attempt to charge unfair prices for the goods covered by a specification of this kind.

Under this plan the Architect or his Client, or both, make the selection of hardware, deliberately and carefully, as its importance justifies, precisely as all other important details of material and of permanent decoration are necessarily determined in advance; whereas, when the selection of the hardware is deferred it is apt to be left until the last minute, and then is made under pressure and without due opportunity for thorough investigation and study. Being thus settled in advance, the architect is relieved from the annoyance he is otherwise inevitably subjected to from rival dealers or manufacturers, each importuning him for attention, and also from all trouble arising from differences between the views of the contractor and those of the architect as to what constitutes "standard hardware of approved design," as is liable to be the case where the hardware is included in the general contract and left to selection or purchase by the contractor. Moreover, in this way both the architect and contractor, as well as the owner, have definite knowledge, in advance, of the cost of hardware, and can include this item

in the summary of total cost with certainty that it is correct and final.

This plan has been adopted during recent years by many leading architects, and with steadily increasing favor. The fact that it had its origin with such members of the profession and is now used by them to the exclusion of other plans is the best evidence of its intrinsic merit. Where it is adopted the specifications for hardware should follow the lines suggested in Form 2 and Schedules A, B or C (pages 1002 to 1010), according to which of the methods A, B or C, above referred to, is selected.

#### PLAN 3. HARDWARE COVERED BY FIXED ALLOWANCE.

Under this plan Finishing Hardware is *included* in the general specification, as under Plan 2, but on a different basis, which consists in specifying a *fixed sum* to be allowed by the contractor for the purchase of the Finishing Hardware, the architect or owner reserving the right of selection within this limit, and of exceeding it on condition of paying the excess cost.

This plan is distinctly inferior to either of the two preceding, and has little to commend it except where conditions preclude the definite selection of hardware at the time and under the conditions which are essential to the best result. It may be easier, at the moment, simply to say that so many dollars shall be allowed for hardware than to select or specify it, but sooner or later it must be selected, and the selection will usually be made with greater care and discrimination if done in advance than if done under the pressure which nearly always exists as the work of building approaches completion. Moreover, as much, if not all, of the Finishing Hardware usually has to be made to order its quality will distinctly be better if ample time be given in which to produce it, than if it is made in haste because, for any reason, it has not been ordered until nearly or quite the time

when it is wanted. Delay in ordering is also liable to result in delay in delivery, and this in turn may interfere with the finishing of cabinet work and so retard the completion of the entire building. On all grounds it is better that the selection of the hardware should be made at an early date.

If, however, circumstances compel resort to the method of a "fixed allowance" its objections will be diminished by the architect or owner making a preliminary selection of designs and finishes, and then obtaining from the manufacturer or dealer a preliminary estimate, based on a sehedule of quantities compiled from the architect's plans, which estimate, while not final, will at least approximately indicate the allowance which reasonably should be made for the Finishing Hardware. While the kinds and quantities of hardware finally selected may not conform exactly to this preliminary estimate, the latter constitutes a safer basis for the "fixed allowance" than any sum arrived at by arbitrary determination or guess work.

Where this plan is adopted Form 3 (see page 1010) may be followed in framing the specification for hardware.

# PLAN 4. HARDWARE COVERED BY ALLOWANCE PER OPENING.

Under this plan (commonly known as the "Boston Plan"), as under Plan 3, the Finishing Hardware is included in the general specification, but on a basis which consists in specifying a fixed sum per opening to be allowed by the contractor for the purchase of the Finishing Hardware, and in leaving to the contractor the selection of hardware within the limits of price thus indicated.

Where used in the above form this plan is the crudest and most unsatisfactory of any in use. Formerly it was much in vogue in Boston, but fortunately it is now decreasing in use there

and is nearly obsolete elsewhere. By leaving the selection of Finishing Hardware to the contractor it opens the door to endless controversies, and rarely produces results which are satisfactory either to the architect or his client. In principle it is as illogical as to specify a price at which the contractor is to furnish the completed building, leaving all details of its construction and finish to his decision. The plan is unfair to the contractor as well as to the owner, and is so unsuitable for its purpose that no suggestion is offered as to the form of specification required where it is adopted.

Where, however, under this plan the right of selection is reserved to the architect or owner, within the limit of a stated cost per opening, this plan becomes equivalent to Plan 3, with the allowance for hardware stated "by opening" instead of "in lump." In most cases it is better to state the allowance in lump rather than by opening, as in this way greater flexibility is afforded for the exercise of taste or judgment by the architect or owner in the selection of the Finishing Hardware when finally made.

In Section 2 immediately following will be found Forms of Specifications suitable for use under each of the "Plans" above described.

### Section 2.

## Forms of Specifications.

of Hardware Specifications, and a description of the subject of Hardware Specifications, and a description of the several methods of specifying Hardware which are most commonly employed. The Standard Forms for Specifications given below are framed in harmony with the statements contained in the foregoing discussion of this subject, and cover each of the several Plans therein described. Standard Forms for Contracts will be found in Section 3, page 1012.

#### FORM 1.

For Use Where Plan I is Adopted—Hardware Reserved.

(See page 996 for Explanation of "Plan I.")

THE ROUGH HARDWARE, such as nails, screws, sash pulleys, sash chains (or sash cord), sash weights, anchors, screw bolts, sliding door hangers, etc., shall be furnished by the *contractor*, and at his own cost, as specified in connection with the carpenter work or otherwise; all of which shall be of standard quality approved by the architect.

The Finishing Hardware, including butts, locks and their trim, and the other fastenings and metal work for doors, windows, closets and cabinets, will be furnished by the owner, delivered at the building in the quantities and at the times reasonably needed by the contractor; the contractor to be responsible therefor after delivery and until completion of the building. All Finishing Hardware is to be properly fitted and applied in place by the contractor, under the direction and to the satisfaction of the architect. Door knobs after being fitted in place, are to be kept covered with cloth until the building is completed, to protect them from injury by handling, and all keys are to be cared for by the contractor until the building is completed and then to be delivered to the owner, either in their locks or with tags attached to indicate where they belong.

The contractor shall furnish the manufacturer or dealer from whom the Finishing Hardware is purchased with all information as to the details of wood work which may be necessary or desirable to enable the party furnishing the Finishing Hardware to understand the requirements and to harmonize the Hardware with the Cabinet work to such extent as may be necessary and feasible, and, where interferences are discovered, to have them adjusted before the Hardware is supplied.

#### FORM 2.

FOR USE WHERE PLAN 2 IS ADOPTED—HARDWARE SPECIFIED DEFINITELY.

(See page 996 for Explanation of "Plan 2.")

THE ROUGH HARDWARE, such as nails, screws, sash pulleys, sash chains, (or sash cord), sash weights, anchors, screw bolts, sliding door hangers, etc., shall be furnished by the *contractor*, and at his own cost, as specified in connection with the carpenter work or otherwise; all of which shall be of standard quality approved by the architect.

THE FINISHING HARDWARE, including locks and their trim, butts, door bolts, window and shutter fastenings, catches, hooks, etc., including therewith knobs, escutcheon plates and other metal trim for doors, windows, closets and cabinet work, together with all necessary screws therefor, shall also be furnished by the *contractor* [for the wood work?] in conformity with

Schedule A, page 1003, (or B, page 1007; or C, page 1009); attached to and forming part of this specification, in which is set forth the character of the Finishing Hardware to be used in the several parts of the building. The quantities of such hardware required will be ascertained by the contractor from the plans and specifications, and shall be such as to provide the proper fastenings and trim for all doors, windows, closets and cabinet work, in conformity with the intent of the plans and specifications.

The contractor shall take charge of, and be responsible for, such hardware when and as delivered at the building by the manufacturer or dealer by whom supplied. At the proper time the contractor, in a suitable and workmanlike manner, shall fit and apply the hardware in place, to the satisfaction of the architect and subject to his approval, being responsible for its proper care and protection until the building is completed and is accepted by the owner.

The contractor shall furnish the manufacturer or dealer, from whom the Finishing Hardware is purchased, with all information as to the details of wood work which may be necessary or desirable to enable the party furnishing the Finishing Hardware to understand the requirements and to harmonize the hardware with the Cabinet work to such extent as may be necessary and feasible, or, where interferences are discovered, to have them adjusted before the hardware is made.

The decision of the architect concerning any and all disputes arising under Original from the E.R. Butler & Co. Research Library

this contract relating to the Finishing Hardware, or its application, shall be final and binding upon the contractor.

#### SCHEDULE A.

(For use with Form 2, page 1002).

The Finishing Hardware required in the building shall conform absolutely, as to maker, catalogue number, design, size, metal, finish and quality, to the following specifications.

[Then should follow a full and accurate description of the hardware selected, which may be specified by rooms, by opening, by "combination," or in such other way as will best meet the conditions in each case. A few examples are given below.]

Unless otherwise specified the hardware shall all be the product of The Yale & Towne Mfg. Co., and in such case the catalogue numbers and finish symbols herein used are those used in the catalogue of said Company, [and also in this volume]. When other goods are called for they will be indicated by the name, catalogue numbers and finish symbols of the maker whose goods are to be used.

Designs, Metals and Finishes.—These shall be as follows for all of the Finishing Hardware in each of the several parts of the building, except when otherwise specified herein or where otherwise directed or authorized by the architect, viz:

Front and vestibule doors, Amherst design, polished brass, AZ10.

Halls, first and second floors, Amherst design, polished brass, AZ10; third floor, plain, polished brass, AZ10.

Parlor and music room, Fairfax design, gold plated, GZ10.

Dining-room, Fairfax design, glass knobs No. G67 with rose, key-plates No. 821, all polished brass, AZ10.

Library and Den, Brabant or Stratford design, as decided by the architect, verde antique, BX67.

Bedrooms, second and third floors, Weymouth design, glass knobs No. G66 with rose, key-plate No. 821, all dull brass, AY22.

Bathrooms; plain bronze, glass knobs No. G86 with rose, nickel plate, NZ10.

Attic, basement and service portions; plain, steel bower-barff, SX80; except pantry, kitchen and laundry, which shall be plain bronze, polished, BZ10.

Butts.—All butts for entrance, room and closet doors, except in attic, basement and other service portions of house, shall be of the No. 750 loose-

pin type, with five knuckles, "hold-fast" pin, and self-lubricating steel washers, 5 inches high and wide enough to clear the door trim. The metal and finish of butts shall correspond with those of the other hardware of the room in which the knuckles of the butts are exposed.

Those for doors in attic, basement and service portions of house shall be of the Stanley Works No. 239 type, 4½ inch size, steel, bronze plated and polished, except where otherwise specified.

Doors 7 feet and less in height to have two butts, and doors over 7 feet to have three butts, to each leaf.

Doors for all dressers, bookcases, china, linen, medicine and cut-out closets, etc., to have butts of appropriate size, conforming in metal and finish to the other hardware of the respective rooms in which located.

Bolts.—Those for the double entrance doors shall be of the flush lever extension type, No. 283 or 383, of length to admit of easy reach, and of metal and finish to match the lock trim. Those for double wardrobe doors to be No. 280, in plain bronze.

For French windows in parlor the No. 883 espagnolette bolt shall be used, and for the casement windows in library the No. 893 cremorne bolt, each to correspond in design, metal and finish with the other hardware of the room in which used.

Locks.—Front entrance shall have Yale cylinder lock No. 750 on outer or front door, and No. 790 on inner or vestibule door, with keys alike to pass both locks. Side and rear entrance doors shall also have No. 750 locks, each to different keys, and also master-keyed to same key as front entrance.

Hall doors in main parts of house to have Standard locks No. 1500, keys all alike.

Sliding doors, if double, to have No. 1706 lock, and, if single, No. 1706 1/2.

All bed-room doors to halls shall have either a No. 1402 lock (3 bolts), or else a No. 1500 lock (2 bolts) and a mortise thumb bolt No. 1050, as directed by the architect.

Communicating doors, between rooms, shall have a No. 1525 or No. P2400 lock, 3 bolts, with thumb-piece on each side.

Bath and toilet-room doors shall have a No. 1505 lock, 2 bolt, with thumb-piece on inside.

All closet doors shall have a 2-bolt lock No. 1500, except in service portions, where No. P3310 may be used, and all shall be trimmed on both sides.

Secret doors shall have a special secret latch, operated by mechanical push button in jamb, of same color as jamb, with knob on one side, if called for.

Doors in all service portions of the house, including attic and basement, shall have 2-bolt lock No. P291834, and also, in the case of doors from halls to bedrooms or to bathrooms, either a mortise bolt No. 1060 or else a 3-bolt lock No. P591834.

All doors to dressers, cupboards, linen and medicine closets, bookcases, cutout boxes, secret panels, etc., shall have brass cabinet locks of appropriate size and style, selected or approved by the architect, either cylinder or lever tumbler as he may direct.

The doors to store room and wine closet shall each have a Yale night latch No. 66 or No. 42, each with different keys and master-keyed to same key as front entrance. Also a Knob latch No. 1000, if called for.

Each door separating the main portion of house from the service portion shall have, in addition to a lock No. 1500, a mortise bolt No. 1050, with thumb-piece on main side.

The entrance and closet doors of each room shall have locks with keys alike.

The trim of each lock shall correspond in metal, design and finish, on each side, with the hardware specified or selected for the room or hall in which it is exposed.

KNOBS.—All locks shall be fitted with "Triplex" screwless knobs and spindles. Knobs for entrance doors shall be 2½ inch size, and for all other doors 2¼ inch, and all shall be of the "bracket-bearing" type.

All knobs for main floor shall be of solid bronze or brass; for upper floors of cut glass, and for service portions of house of bronze metal W55½ and W56, or steel Bower-Barffed S55½ and S56. The me al, design and finish of knob plates and roses, and of the knobs themselves when of metal, shall correspond with those of the hardware specified for the respective rooms in which used.

ESCUTCHEON PLATES.—These shall be of standard sizes obtainable in the designs selected, but of not less than the following lengths, unless so authorized by the architect, viz:

For	front and vestibule door	s,		10 i	nches.
"	other entrance doors,	1.		9	"
"	main floor doors,			8	"
"	upper floor doors,			7	"
"	service portion doors,			6	"

The front and vestibule double doors shall have double trim. All closet doors shall have knobs and plates on both sides.

All escutcheon plates and knob-roses shall have No. o thimbles, to fit knobs of the "bracket-bearing" type.

SASH FASTS.—Those for main floor and basement shall be of the No. 1376 burglar-proof type; those for upper floors No. 1372; and those for attic No. S2400; all to correspond in metal and finish with hardware of room in which used.

SASH LIFTS.—Those for main and upper floors to be of the No. 1349. flush type, of same design as other hardware in the room in which used; those for service portions of house, including attic and basement, to be of the No. 91 hook type, 1½ inch wide, all to correspond in metal and finish with the other hardware. Sash sockets to be provided where needed, and to be of No. 410 type and of appropriate metal.

STOP BEAD SCREWS AND WASHERS.—To be provided for all windows, except in basement and attic, to be of No. 9 flat head screw and washer, and in quantity sufficient to admit of a spacing not to exceed 10 inches.

CASEMENT ADJUSTERS. —Those to be of No. 1395 type, of plain bronze, polished, and of length to permit sash to be opened to a right angle.

INSIDE SHUTTER TRIM.—Butts to be of proper kind and size to hang shutters as shown on drawings, and of plain bronze, polished. Knobs to be 1½ inch size, No. 1021, of plain bronze or ornamental, as selected by architect. Shutter bars to be of No. 1384 type, plain bronze, polished.

COAT AND HAT HOOKS.—These shall be provided for all closets, and in quantity sufficient to allow one hook for each 9 inches of length of rails provided for hooks. Those in main hall coat closet to be No. 513; those in bedroom closets to be No. 513; those in bath-rooms to be one-half No. 513, and one-half No. 1606; and those in all service portions to be No. 2513; all to correspond in metal and finish with the other hardware.

Push Buttons.—These shall be furnished by the contractor for the electrical work, and shall correspond in design, metal and finish, with the other hardware of the door to which adjacent.

Transom Rods.—These shall be of  $\frac{5}{16}$ -inch size in main portions of house and  $\frac{1}{4}$ -inch size in service portions. They shall have an automatic grip, and shall be of length to bring the grip within 5 feet of the floor. They shall correspond in metal and finish with the other hardware of room in which used.

Door Checks. - Blount Liquid Door Checks made by the Yale & Towne

Mfg. Co. shall be furnished for the places, of the sizes and in the finishes specified below, viz.:

For each vestibule storm door size No. 4, solid bronze, polished. For door from butler's pantry to dining room size No. 3, solid bronze, polished. For door from kitchen to hall size No. 3, iron, gold bronzed.

General.—There shall also be provided all other Finishing Hardware usually furnished and reasonably required for the proper completion of the building in conformity with the intent of the plans and specifications, all of which shall conform in quality, design and finish to the other hardware herein more specifically described, and to the cabinet and carpenter work as shown by the plans and details, and as selected or approved by the architect.

#### SCHEDULE B.

(For use with Form 2, page 1002.)

The Finishing Hardware required in the building shall conform absolutely as to size, metal, finish and quality, and as to design where indicated, to the following specifications.

[Then should follow a full and accurate description of the hardware, by items, "combinations" or rooms, the important details of each article being so fully specified as to secure the desired kind and quality and to exclude inferior and cheaper substitutes. A few examples are given below.]

Designs.—These shall be subject to selection or approval by the architect from among the stock patterns of manufacturers; those for the hardware for entrance doors and main floor to be of the best grade, and those for the upper floors of medium grades. The hardware for all service portions of house to be of plain steel, bronze plated.

METALS AND FINISHES.—The hardware for all main portions of the house to be of solid cast |bronze or brass, gold plated for parlor and library, silver plated for dining room, and elsewhere in the natural color, polished. In the service portions to be bronze metal, polished.

Butts.—All butts for entrance, room and closet doors, except when otherwise specified, shall be of solid bronze (or brass), of the loose-pin five knuckle type, with ball tips, self-lubricating double steel bushings and "hold-fast" pins, and of such thickness that a pair of butts of each size shall weigh not less than as follows, other sizes to weigh proportionately, viz.:

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4 \times 4 inch butts, 2 lbs. 6 oz. per pair, without screws.

4 \frac{1}{2} \times 4 \frac{1}{2} " " 3 lbs. 2 oz. " " " " " " 5 \times 5 " " 4 lbs. 3 oz. " " " " " " " 6 \times 6 " " 6 lbs. 6 oz. " " " " "
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Each door or leaf using these butts shall have three butts for doors over 7 feet in height, and two butts for doors 7 feet or less in height. The metal and finish of the butts shall correspond with the hardware of the room in which the knuckles of the butts are exposed.

Bolts.—Door bolts where needed shall have a "lever action," shall be of length to afford an easy reach, and shall conform in metal and finish to the other hardware.

Locks.—The locks for all entrance doors shall be of the cylinder type, with night work,  $\frac{3}{8}$ -inch swivel spindles and not less than 6 inches in height. Those for doors on main floor shall be not less than  $\frac{4}{4}$  inches in height, with two bolts, not less than three lever tumblers, solid steel keys, and "standard" easy spring action. Those for bedroom doors shall be not less than 5 inches in height, with three bolts, not less than three lever tumblers, solid steel keys, and "standard" easy spring action. Those for all service portions of the house shall be not less than  $\frac{3}{4}$  inches in height with three lever tumblers and solid steel keys. Those for store-room and wine cellar shall be mortise cylinder night latches. [And so on until all varieties of locks required are specified.]

Knobs.—Where bronze (or brass) knobs are called for they shall be of solid metal, the top in one piece, without joint, and shall be provided with a device, of established repute, approved by the architect, for attaching them securely to the spindle without resort to any screw-holes in the latter. The knobshank and its thimble shall be of the "bracket-bearing" type, that is, with a turned bearing supporting the knob close to its head.

ESCUTCHEON PLATES.—These shall be not less than 10 inches long for entrance doors, 9 inches for doors on main floor, 8 inches for bedroom and closet doors, and 6 inches for doors in service portion. They shall be of heavy cast metal, with bracket-bearings for knobs, and shall match other hardware in design, metal and finish.

SASH FASTS.—These shall be of burglar-proof construction, and shall operate effectively to draw the two sashes together and to force them vertically against the top and bottom of window frame. They shall be of heavy construction and shall match the other hardware in metal and finish.

SASH LIFTS.—These shall be of the flush type in all main portions of the

house, with cup not less than 2 ½ inches long, and, in the service portions, of the hook type, not less than 1 ¼ inches wide.

TRANSOM Rods.—These shall be of  $\frac{5}{16}$ -inch size in main portions of house and  $\frac{1}{4}$ -inch size in service portions. They shall have an automatic grip, and shall be of length to bring the grip within 5 feet of the floor. They shall correspond in metal and finish with the other hardware of room in which used.

Door Checks.—These, where called for, shall be of the liquid type, of real bronze, polished, in main portions of house, and of iron, gold bronzed, in service portions, and of medium or large size, according to conditions.

GENERAL.—All other hardware required shall be of standard quality and sizes, conforming in metal and finish to the other hardware of room in which used, and subject to selection or approval by the architect.

Note.—The foregoing is merely an outline, is suggestive of the manner in which a schedule of this kind should be compiled, but is by no means complete. The proper method of framing such a schedule is to select carefully a complete line of hardware, made by one or several manufacturers, of satisfactory kind and quality, and then to write a description of each group of articles which shall cover all of the important features but omitting makers' names and numbers

#### SCHEDULE C.

(For use with Form 2, page 1002.)

The Finishing Hardware required in the building shall conform absolutely, as to maker, catalogue number, design, size, metal, finish and quality, to the samples already selected and now on file in the office of the architect, where they may be examined by the contractor, and where he can obtain full information as to the doors, windows, etc., on which each article shown by the samples, is to be used. These samples will remain on file in the architect's office until the completion of the building, and shall constitute the standard to which all Finishing Hardware used in the building must conform in every respect. Upon the completion of the building, and before its acceptance, the architect will cause an inspection to be made to ascertain if the hardware actually used conforms in all respects to the samples on file, and also if it has been properly applied and is in good condition: the acceptance of the hardware to be conditioned on a satisfactory result of this inspection, and the decision of the architect to be final and binding upon the contractor as to all questions relating to the hardware so furnished.

The contractor will be furnished with full plans and specifications of the building, and with any additional information needed to enable him to ascertain the quantities of hardware of each kind required under this specification for the complete equipment of the building, and will be responsible for the furnishing of the quantities so required.

NOTE.—This method implies that a complete selection of the hardware be made in advance, and that arrangement be made with a manufacturer or dealer whereby the official set of samples will be supplied to the architect and be properly tagged for convenient use and reference. When so supplied they should be kept under lock and key until the contract is completed.

#### FORM 3.

FOR USE WHERE PLAN 3 IS ADOPTED—HARDWARE COVERED BY FIXED ALLOWANCE.

(See page 998 for Explanation of "Plan 3.")

THE ROUGH HARDWARE.—The same form of specification for this to be used as indicated under Form 2, page 1002.

THE FINISHING HARDWARE.—The Contractor [for the Cabinet work?] shall reserve the sum of \$--- to be expended, under the direction of the architect, for the Finishing Hardware, including therein all locks and their trim, butts, door bolts, window and shutter fastenings, catches, hooks, etc., and including therewith knobs, escutcheon plates and other metal trim for doors, windows, closets and cabinet work, together with all necessary screws therefor, in such quantities as may properly be required for the complete equipment of the building in accordance with the intent of the plans and specifications, and to the satisfaction of the architect. The contractor shall fit and apply in place all of said Finishing Hardware, in a neat and workmanlike manner, to the satisfaction of the architect and subject to his approval, and shall be responsible for its proper care and protection until the building is completed and accepted by the owner.

All of the Finishing Hardware so required shall be selected or approved by the architect, and no such hardware shall be used, save by the consent in writing thereto of the architect, which is not the product of one of the following manufacturers, viz.: A. B. & Co., B. C. & Co., or C. D. & Co. Original from the E.R. Butler & Co. Research Library

The Finishing Hardware shall all be of the best kind and quality obtainable within the limit of the allowance above stated, a proportionate deduction from the above contract price to be made if the actual cost, at fair market prices, of the hardware selected and finally approved by the architect (with ten per cent. added to such cost), does not equal the above stated allowance; the right being hereby specificially reserved to the owner of selecting and using Finishing Hardware of better quality or higher cost than herein contemplated upon condition that, in such case, the owner shall pay to the contractor such additional amount as, with the sum stated above, shall equal the actual cost, at fair market prices, of the Finishing Hardware so selected, with ten per cent. added . to such cost to cover the contractor's work in applying the hardware. contractor shall furnish the manufacturer or dealer, from whom the Finishing Hardware is purchased, with all information as to the details of woodwork which may be necessary or desirable to enable the party furnishing the Finishing Hardware to understand the requirements and to harmonize the hardware with the Cabinet work to such extent as may be necessary and feasible, or, where interferences are discovered, to have them adjusted before the hardware is made.

## Section 3.

# Standard Forms of Contract for Builders' Hardware.

HE preceding Sections of this Part have indicated the Standard Forms which are recommended for Specifications for Hardware. For the purpose of recording a Contract for furnishing hardware one of the following Forms may be availed of:

#### THE UNIFORM CONTRACT.

This is the form of contract for building operations adopted and recommended for general use by the American Institute of Architects and the National Association of Builders, of which the Inland Architect Press, Chicago, Ill., is the licensee for exclusive publication. It can be obtained from most dealers in architects' supplies. It is carefully drawn to cover all legal requirements, and, by inserting the necessary descriptive matter, can be utilized to embody a contract for furnishing hardware under any of the plans previously described. Its text is as follows, viz:

The Uniform Contract, adopted and recommended for general use by the American Institute of Arch tects and the National Association of Builders.

THIS AGREEMENT, made the . . . . day of . . . . 19 . . by and between . . . . . . party of the first part (hereinafter designated the Contractor), and . . . . . . . party of the second part (hereinafter designated the Owner),

Witnesseth that the Contractor, in consideration of the agreements herein made by the Jwner, agree with the said Owner, as follows:

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ARTICLE I. The Contractor shall and will provide all the materials and perform all the work for the . . . . . . . . as shown on the drawings and described in the specifications prepared by . . . . . Architect, which drawings and specifications are identified by the signatures of the parties hereto, and become hereby a part of this contract.

ART. II. It is understood and agreed by and between the parties hereto that the work included in this contract is to be done under the direction of the said Architect, and that . . . . . . decision as to the true construction and meaning of the drawings and specifications shall be final. It is also understood and agreed by and between the parties hereto that such additional drawings and explanations as may be necessary to detail and illustrate the work to be done are to be furnished by said Architect, and they agree to conform to and abide by the same so far as they may be consistent with the purpose and intent of the original drawings and specifications referred to in Art I.

It is further understood and agreed by the parties hereto that any and all drawings and specifications prepared for the purposes of this contract by the said Architect are and remain . . . . . property, and that all charges for the use of the same, and for the services of said Architect are to be paid by the said Owner.

ART. III. No alterations shall be made in the work except upon written order of the Architect; the amount to be paid by the Owner or allowed by the Contractor by virtue of such alterations to be stated in said order. Should the Owner and Contractor not agree as to amount to be paid or allowed, the work shall go on under the order required above, and in case of failure to agree, the determination of said amount shall be referred to arbitration, as provided for in Art. XII. of this contract.

ART. IV. The Contractor shall provide sufficient, safe and proper facilities at all times for the inspection of the work by the Architect or . . . authorized representatives. He shall, within twenty-four hours after receiving written notice from the Architects to that effect, proceed to remove from the grounds or buildings all materials condemned by . . . . . whether worked or unworked, and to take down all portions of the work which the Architects shall by like written notice condemn as unsound or improper, or as in any w y failing to conform to the drawings and specifications, and thall make good all work damaged or destroyed thereby.

ART. V. Should the Contractor at any time refuse or neglect to supply a sufficiency of properly skilled workmen, or of materials of the proper quality, or fail in any respect to prosecute the work with promptness and diligence, or

fail in the performance of any of the agreements herein contained, such refusal, neglect or failure being certified by the Architect, the Owner shall be at liberty, after . . . days' written notice to the Contractor, to provide any such labor or materials, and to deduct the cost thereof from any money then due or thereafter to become due to the Contractor under this contract; and if the Architect shall certify that such refusal, neglect or failure is sufficient ground for such action, the Owner shall also be at liberty to terminate the employment of the Contractor for the said work and to enter upon the premises and take possession, for the purpose of completing the work included under this contract, of all materials, tools and appliances thereon, and to employ any other person or persons to finish the work, and to provide the materials therefor; and in case of such discontinuance of the employment of the Contractor . . . . shall not be entitled to receive any further payment under this contract until the said work shall be wholly finished, at which time, if the unpaid balance of the amount to be paid under this contract shall exceed the expense incurred by the Owner in finishing the work, such excess shall be paid by the Owner to the Contractor, but if such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner. The expense incurred by the Owner as herein provided, either for furnishing materials or for finishing the work, and any damage incurred through such default, shall be audited and certified by the Architect, whose certificate thereof shall be conclusive upon the parties.

ART. VII. Should the Contractor be delayed in the prosecution or completion of the work by the act, neglect, or default of the Owner, of the Architect, or of any other contractor employed by the Owner upon the work, or by any damage caused by fire, lightning, earthquake, cyclone or other casualty for which the Contractor is not responsible, or by strikes or lockouts caused by acts of employees, then the time herein fixed for the completion of the work shall be extended for a period equivalent to the time lost by reason of any or all of the causes aforesaid, which extended period shall be determined and fixed by the Architect; but no such allowance shall be made unless a claim therefor is presented in writing to the Architect within forty-eight hours of the occurrence of such delay.

ART. VIII. The Owner agrees to provide all labor and materials essential to the conduct of this work not included in this contract in such manner as not to

delay its progress, and in the event of failure so to do, thereby causing loss to the Contractor, agrees that he will reimburse the Contractor for such loss; and the Contractor agrees that if he shall delay the progress of the work so as to cause loss for which the Owner shall become liable, then he shall reimburse the Owner for such loss. Should the Owner and Contractor fail to agree as to the amount of loss comprehended in this Article, the determination of the amount shall be referred to arbitration as provided in Article XII of this contract.

ART. IX. It is hereby mutually agreed between the parties hereto that the sum to be paid by the Owner to the Contractor for said work and materials shall be \$.... subject to additions and deductions as hereinbefore provided, and that such sum shall be paid by the Owner to the Contractor, in current funds, and only upon certificates of the Architect, as follows:....

The final payment shall be made within . . . . days after the completion of the work included in this contract, and all payments shall be due when certificates for the same are issued.

If at any time there shall be evidence of any lien or claim, for which, if established, the Owner of the said premises might become liable, and which is chargeable to the Contractor, the Owner shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify him against such lien or claim. Should there prove to be any such claim after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging any lien on said premises made obligatory in consequence of the Contractor's default.

- ART. X. It is further mutually agreed between the parties hereto that no certificate given or payment made under this contract, except the final certificate or final payment, shall be conclusive evidence of the performance of this contract, either wholly or in part, and that no payment shall be construed to be an acceptance of defective work or improper materials.
- ART. XI. The Owner shall during the progress of the work maintain insurance on said work, in his own name and in the name of the Contractor, against loss or damage by fire, lightning, earthquake, cyclone or other casualty. The policies to cover all work incorporated in the building, and all materials for the same in or about the premises, and shall be made payable to the parties hereto, as their interest may appear.
- ART. XII. In case the Owner and Contractor fail to agree in relation to matters of payment, allowance or loss referred to in Arts. III or VIII of this contract, or should either of them dissent from the decision of the Architect

referred to in Art. VII of this contract, which dissent shall have been filed in writing with the Architect within ten days of the announcement of such decision, then the matter shall be referred to a Board of Arbitration consisting of . . . . . . . in behalf of the Owner, and . . . . . . . in behalf of the Contractor, these two to select a third. The decision of any two of this Board shall be final and binding on both parties hereto. In event of the death or inability to serve of the party named in behalf of the Owner, then the Owner shall select a person in his place; in the event of the eath or inability to serve of the party named in behalf of the Contractor, then the Contractor shall select a person in his place; in event of the death or inability to serve of the third party, then the remaining arbitrators shall choose a person in his place. Each party hereto shall pay one-half of the expense of such reference.

ART. XIII. The said parties for themselves, their heirs, successors, executors, administrators and assigns, do hereby agree to the full performance of the covenants herein contained.

In Witness Whereof, the parties to these presents have hereunto set their hands and seals, the day and year first above written.

In presence of .......

## The Yale & Towne Standard Contract.

This has been very carefully framed to cover all the conditions involved in the furnishing of hardware by contract, under any of the plans previously described, and is a better form for this purpose than the foregoing general one designated to cover contracts relating to work and materials of every kind. Copies of it are obtainable on application to The Yale & Towne Mfg. Co., 9-11-13 Murray St., New York City. Its text is as follows, viz:

THE YALE & TOWNE MFG. CO.

## Contract for Finishing Hardware.

Made this . . . day of . . . . in the year one thousand, nine hundred and . . . . . By and between The Yale & Towne Manufacturing Company, of New York City, hereinafter designated as the "Company," party of the first part, and . . . . . of . . . . . in the County of . . . . and State of . . . . . doing business under the firm name and style of . . . . . . .

hereinafter designated as the "Purchaser," party of the second part.

Witnesseth, That the said parties, in consideration of One Dollar (\$1.00),

each to the other in hand paid, receipt whereof is hereby acknowledged, and of the covenants and agreements herein set forth, do hereby mutually agrees for themselves and their legal representatives, each with the other, as follows, to wit:

- That this contract shall cover the hardware specified in the schedule attached hereto and intended for use in
- Building . . . . . Location . . . . . Name of Owner . . . . . Name of Architect . . . . . Name of Contractor . . . . . Name of Dealer . . . . .
- That said hardware shall conform in kind and quantity to the schedule attached hereto and forming part hereof, and shall all of it be of thoroughly first-class workmanship and material, made in conformity with the established standard of said Company for goods of each of the various kinds specified, and in accordance with such drawings, specifications or samples as may have been submitted in connection herewith and mutually agreed on.
- That all of the hardware so furnished shall be subject on behalf of the Purchaser to inspection and approval, when and as delivered, by . . . . . . . . .
- That said Company, at the time of each delivery, shall furnish said Purchaser with a memorandum invoice, in duplicate, specifying the goods so delivered, and that upon receipt and inspection of such shipment one of these invoices shall be signed by said Purchaser or by a person designated by him for that purpose, and returned to said Company in acknowledgement of receipt of the goods. Failure so to sign and return such receipts within five days after the arrival of goods to constitute an acknowledgement of their receipt, unless prior claim be made by the Purchaser for shortages or other non-conformity with contract.
- That the said Purchaser shall furnish to the said Company, either at the execution hereof or from time to time, reasonably in advance, a list of the hardware as it may be needed at the building, which list shall specify the quantity required; the catalogue numbers of locks and hardware; the metals and finishes to be used; and all necessary information as to dimensions, thickness, hand and bevel of doors; corresponding details concerning sashes or other wood work on which said hardware is to be used; and all other information needed by the said Company to enable it to

design, manufacture, finish, label and deliver said hardware; the said Purchaser to furnish with such list, any drawings or sketches which may reasonably be needed for the correct understanding of the facts, in order that the said Company may thus be enabled to provide said hardware as needed, to label it as desired, and to deliver the same as said Purchaser may request, the said Company not to be responsible for any delays which may arise because of the failure of the said Purchaser thus to supply this information.

- That the contract price for the hardware covered by this PAYMENT. contract and included in the schedule annexed hereto, shall be \$ . . . . . . and that such sum shall be paid in current funds by the Purchaser to the Company in installments as follows, viz: Ninety per cent. (90%) of the value of the goods delivered in any calendar month shall be paid on or before the fifteenth day of the succeeding month, the Company having previously made a written application to the Purchaser for such payment, showing the value of the goods delivered as above, this application being subject to approval by the architect, provided, however, that such approval shall not be delayed more than ten days after the delivery of such application by the Company to the Purchaser; and the remaining ten per cent. (10%) thus reserved to be payable within thirty days after the final completion and delivery of all the hardware covered by this contract; provided, however, that if the inspection and approval of said hardware is delayed more than ten days after delivery of the goods no payment due under the foregoing terms shall be deferred because of such failure more than ten days beyond the time hereinabove stipulated.
- 8. Drawings.

  That in case any of the work covered by this contract is executed from drawings furnished by either of said parties to the other, a copy of such drawing or drawings shall be submitted by the party furnishing it to the other, and be signed by both, such signed copy becoming thereby a record of the agreement between said parties as to the details of the work covered by such drawings.
- 9. Changes. That no additions to, or deductions from, the goods covered by the schedule attached hereto shall be made, nor any changes in the details thereof, except by written order from the said Purchaser, or from the architect or other agent duly authorized by him, to said Company, accepted in writing by the latter, and that no claim shall be made by said Company for extra compensation for additional goods furnished, nor by said Purchaser for allowance for goods not furnished or returned unless such changes from this contract, and the schedule attached hereto, shall have

been mutually agreed upon in writing and the amount to be added to or deducted from the contract price herein named noted over the signatures of the parties hereto on the memorandum of such supplementary agreement.

- That when any of the goods covered by this contract shall have been delivered as aforesaid by the said Company its responsibility for such goods, except as to their quality and workmanship, shall thereupon cease and determine, and that any loss or damage to such goods which thereafter may result from fire, the acts of workmen or other persons, or from any other cause whatsoever, shall be borne by the said Purchaser.
- The said Company hereby agrees, subject only to unavoidable delays arising from strikes, lockouts, fire, action of the elements, or other causes beyond its reasonable control, to complete and deliver said hardware on or before the following date or dates, viz:.....
- Should the Company at any time refuse or neglect to Non-12. furnish the hardware covered by this contract in con-PERFORMANCE. formity with the conditions herein set forth, or if any hardware so furnished fails to conform in quality or otherwise to the conditions of this contract, or fail in any respect to prosecute the work with promptness and diligence, or fail in the performance of any of the agreements herein contained, such refusal, neglect or failure being certified by the architect, the Purchaser shall be at liberty, after ten days written notice to the Company, to provide other hardware of similar kind and quality, and to deduct the costhereof from any money then due, or thereafter to become due, to the Company under this contract, the expense incurred by the Purchaser on this account for obtaining such hardware to be audited and certified by the architect, whose certificate thereof shall be conclusive and binding upon the parties.
- That in the event of any disagreement arising between the parties hereto concerning any matters under this contract, or concerning any claims for damages because of the failure of either of the parties hereto to conform to its obligations, it is hereby mutually agreed that the matter so in dispute shall be referred to the architect for decision and award. In the case of dissent from such award by either party hereto the matter at issue shall be referred to three disinterested arbitrators, one to be appointed by each of the parties to this contract and the third by the two thus chosen, the decision of any two of whom shall be final and binding, and each of the parties hereto shall pay one-half of the expenses of such reference.

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#### SIMPLE FORM OF CONTRACT.

For minor transactions, when the quantity and value of hardware involved is small, the following brief form may be used, viz:

Contract for Finishing Hardware.
Contract made this day of , 19 between
Owner, and Contractor. The Contractor
agrees to furnish, and to deliver at all of the hardware stated
below, according to instructions, drawings and specifications made by
Architect, for the sum of
covered by this contract is as follows:
(Here insert specification.)
The Owner agrees to pay the Contractor the said amount of
\$ , as follows: The Contractor agrees that all
hardware covered by this contract shall be of standard quality, material and
finish, that delivery of the same, complete, shall be made within weeks
from the date when he shall have received all necessary instructions and de-
tailed information, and that the decision of the Architect as to any and all

questions relating thereto shall be final and binding upon the Contractor.

## Section 4.

# Examples of Architects' Practice in Specifications for Builders' Hardware.

form of specification, sometimes elaborate but usually brief, intended to cover Builders' Hardware. However suitable these may have been under the conditions formerly existing, few if any of them are well adapted to present conditions and to the development which American hardware has achieved during recent years. Nevertheless, it will be found interesting, and in some cases helpful, to examine the methods of specifying Finishing Hardware which prevail at the present time and to contrast these with the forms herein recommended. Accordingly the following examples of actual specifications now used by prominent architects are given.

## Example (a).

#### FOR A CITY RESIDENCE.

(Plan I. Hardware Reserved. See page 996.)

All finishing hardware for this building shall be selected and purchased by the architects and will be received and taken care of by the carpenter contractor, who will be responsible for same. It shall be fitted and applied in the most workmanlike manner with due care to the finishes. All knobs shall be protected by canton flannel which shall be allowed to remain until the work is completed. All cutting and fitting shall be done before the woodwork is painted or varnished and the hardware shall be applied after all painting and varnishing.

The above reservation does not include constructional hardware such as nails,

screws, sash pulleys, sash weights, iron chains, iron gates, etc., etc., nor does it include the setting of the hardware.

The carpenter contractor shall furnish to the hardware contractor any information which may be necessary for him to furnish the hardware to fit the various conditions.

## Example (b).

#### FOR AN APARTMENT HOUSE.

(Plan 1. Hardware Reserved. See page 996.)

All finishing hardware for this building shall be selected and contracted for by the owner, to be received and taken care of by the carpenter who will be responsible for same after delivery and who shall fit all material in the most workmanlike manner.

All rough hardware such as nails, sash pulleys, screws, sash chains, sash weights, hand rail brackets, etc, shall be furnished by the contractor at his cost.

## Example (c).

#### FOR A RECTORY AND CHURCH.

(Plan 2. Method A. Hardware specified definitely. See page 996.)

All hardware to be used in these buildings shall be of solid cast bronze or brass metal; all to be highly polished and free from defects of any kind. Any defective pieces shall be replaced by this contractor at his expense.

Finishes.—On the outside of all entrance doors the hardware will be of cast brass, ship finish: all the hardware throughout all toilet and bath rooms to be nickel plated finish: all other hardware to be natural bronze finish. The catalogue numbers and ornamentations hereinafter mentioned refer to the catalogue of the Yale and Towne Mfg. Co. All goods must be equal or similar to those designated by such numbers.

#### RECTORY.

Main Entrance Doors to Basement-

750 Butts, 5×5 inches.

726R Lock, master-keyed, with 2 half pair special Lever Handles, ebony and brass for outside, and 2 half pair W55 Knobs, no rose, inside: 401½ special Escutcheon Plates outside, and 2 5/7426 Escutcheon Plates inside.

283 Bolt, 18 inch, and one 12 inch.

147 Butts, 3×3 inches.

1187 Transom Catch and 1332 Transom Chains, 12 inch.

Garden Entrance Door: Vestibule to Passage, and Vestibule to Ante-room—

780 Butts, 5×5 inches.

726 Lock, masterkeyed, electric strike, pair W 55 1/2 Knob and 5/7401 1/2 and 5/7426 Escutcheons.

147 Butts, 3×3 inches; B265 Transom Lifts and size 4 Blount Check.

Vestibule Door to Main Hall (Double Acting)-

Double Acting Bommer Spring Hinges.

304 1/4 Cylinder Dead Lock, master-keyed.

71730 Push Plates (20 by 4 inches).

Kick Plates both sides (12 inches high by 1 inch thick).

First Floor Entrance Door to Church-

750 Butts, 5×5 inches.

726 Lock, with special Lever Handles, and 401½ Escutcheon (Bordeaux design) outside; and W56 Knob and 5/7426 Escutcheon inside.

Sliding Doors-

McCabe Sliding Door Hangers complete with Guides, Stops, etc.

1706 Lock, with 854 Escutcheon, Bristol design.

Hall Door to Degagement Passage-

780 Butts, 5×5 inches.

726 Lock, master-keyed, with Electric Strike, dry battery wires, etc.

14 Knobs, 401 1/2 and 426 Escutcheons, Bristol design.

Size 4 Blount Door Check.

Kick Plate on hall side 12 inches high by 1/8 inch thick.

Dining Room Door to Pantry (double acting)-

Double Acting Bommer Spring Hinges.

1730 Push Plates, both sides, Bristol design.

Kick Plates, both sides, 12 inches high by 1/8 inch thick.

All Other Single and Double Interior Doors on First Floor-

780 Butts, 5×5 inches.

1440 Locks, master-keyed, 14 Knobs and 411 Escutcheons, Bristol design, and 283 Bolts.

All Other Single and Double Interior Doors, not otherwise mentioned throughout Cellar, Basement, 2nd and 3rd Floors.

780 Butts, 5×5 inches; 283 Bolts.

1440 Locks, master-keyed, W56 Knobs and 5/7411 Escutcheons.

In addition to the above, the Doors to the Wine Cellar and Wine Closet (in cellar) are to have—

348 Cylinder Dead Locks.

Doors to Medicine Chest-

780 Butts, 2 × 2 inches.

PA152 Locks, RA783 Keys and 812 Key Plates.

Cut-out Box Doors-

780 Butts 21/2 × 21/2 inches, and PA208 Locks alike.

Dumb-waiter Doors-

71349 Sash Lifts.

Hinged Sash in Cellar-

147 Butts, 3×3 inches; Barrel Bolts 3-inch brass, and Hooks and Eyes 6-inch brass.

Double Hung Sash (1st floor)-

24 Sash Fasts, 1349 Sash Lifts, Bristol design, Stop Bead Screws and Washers.

Double Hung Sash throughout the Building not otherwise mentioned— 24 Sash Fasts, 71349 Sash Lifts, Stop Bead Screws and Washers.

Partition Sash throughout Building-

1335 Sash Centers, with friction springs; 1188 Transom Catches, and 1332 Transom Chains.

Circular Sash (3rd floor)-

1335 Sash Centers and 1069 Turnbuckles

Casement Sashes-

Butts, Special, 4 inches high, made to fit condition.

893 Cremorne Bolts for Windows opening in, and 895 for those opening out. Plain for Basement and Fairfax for 1st floor.

1393 or 1394 Adjusters for Sash opening in; 1396 for those opening out.

280 Bolts.

Transoms over Windows and Interior Doors-

147 Butts, 3×3 inches; B265 Transom Lifters.

1358 Sash Hooks on Ash poles; one for each floor.

Hooks-

413 Coat and Hat Hooks, and 713 Ceiling Hooks for closets.

#### CHURCH.

Outside Entrance Doors to Vestibule-

Ball Bearing Pivot Hinges made special with quadrants, etc., complete.

658 Lock, master-keyed. Special ebony Lever Handles outside: Knobs inside and Escutcheons both sides.

Hinge Straps, Studs, Door Stops and Hooks. Special.

888 Extension Bolts.

All Other Entrance Doors-

750 Butts, 6×6 ins.

658 Lock, master-keyed. Special ebony lever Handles outside, W55 Knobs inside; special Escutcheon outside and 7/7424 Escutcheon inside.

Hinge Straps, Door Stops and Hooks. Special.

283 Bolts and size 5 Blount Door Checks.

Note—All special items to be as per details and designs furnished by Architects.

Entrance Doors to Engine and Boiler Rooms-

750 Butts 5×5 ins.

726 Lock master-keyed. W 55½ Knob and 7/7401½ Escutcheon outside and 5/7426 Escutcheon inside.

Double Acting Entrance Doors-

Double Acting Spring Hinges: 344 1/4 Cylinder Dead Lock, master-keyed.

7/1730 Push Plates 20×4 ins., Kick Plates 11/8 in. thick.

283 Bolts and 1109 Door Stops.

Passage Doors to Church, Rear Entrance Door to Lobby, Vestry Lobby Doors to Vestry, Lobby Doors to Sanctuary, or any other doors marked on the Plans to have Cylinder Locks.

780 Butts, 5×5 ins.

726 Lock, master-keyed. W56 Knobs and 5/7401½ Escutcheon outside and 5/7426 Escutcheon inside.

Size 4 Blount Door Checks.

All Other Single and Double Interior Doors-

780 Butts, 5×5 in.

1440 Lock, master-keyed. W56 Knobs and 5/7411 Escutcheons. 283 Bolts.

Size 4 Blount Door Checks.

Double Acting Interior Doors-

Double Acting Spring Hinges: 348 Dead Locks, master-keyed.

71730 Push Plates 20×4 ins., and Kick Plates 1/8 in. thick.

283 Bolts.

Double Hung Sashes-

24 Sash Fasts, 71349 Sash Lifts and 410 Sash Sockets.

1358 Sash Hooks on Ash poles: Stop Bead Screws and Washers.

Casement Sashes—

Special Butts 4 ins. high: 893 Bolts: 1396 Adjusters and 280 Bolts.

Pivoted Sashes-

1335 Sash Centers and 1388 Casement Adjusters.

Transoms over Doors and Sashes-

147 Butts, 3×3 ins., and B265 Transom Lifters.

## Example (d).

#### FOR A MUNICIPAL BUILDING.

(Plan 2. Method A. & B. Hardware specified definitely. See page 996.)

All hardware of the types and kinds hereinafter described shall be of the best manufacture and shall be subject to the approval of the architects.

A complete line of samples representing the intention of each bidder shall be placed on file in the architect's office; those of the successful bidder to remain on file until the completion of the contract.

All hardware shall be complete with screws necessary to properly apply same.

All hardware shall be properly wrapped and distinctly marked for each opening and each floor; a schedule or list accompanying each shipment, enclosed in the case or bundle.

All Locks shall be guaranteed to operate satisfactorily for one year after application.

All Locks, Latches, etc. shall center their respective door stiles with Knobhole and key-hole; the faces shall be beveled to suit the bevel of doors and all lips of strikers fully protect the trim from injury by the latch bolt.

All Cylinder Locks shall be master-keyed by floors with three Grand Master Keys. This will not apply to any entrance door lock.

The carpenter contractor shall receive receipt and be responsible for all hardware delivered. He shall properly set and apply all finishing hardware hereinafter described, retaining each knob in its flannel covering until the work is completed.

The carpenter contractor shall co-operate with the hardware contractor, furnishing him with all necessary details and information of woodwork at least three months in advance of the time the hardware is required.

QUALITY—All hardware shall be of plain, heavy cast bronze or brass as may be required.

Butts—All butts shall be solid cast bronze, five knuckles, steel bushed at every joint, self lubricating, loose pin with "retaining pin" device. All butts shall be of the heights stated below and wide enough to clear the trim wherever necessary; two butts to each leaf for doors 7 feet or under and three butts to each leaf for doors over 7 feet.

All doors 1 1/8 ins. thick shall have butts 4 ins. high No. 780.

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Butts, 4 ins., shall weigh 2 lbs. for 4×4 ins., without screws or paper.

All other sizes shall weigh in proportion.

All hinged casements shall have three butts for each leaf to sash over 5 feet high, and two butts for sash under 5 feet high. Butts to measure 4×4 ins. and to have 5 knuckles, steel bushed at every joint, self-lubricating, fast pin, to weigh 2 lbs. per pair without screws or papers, (350).

All water closet doors shall be hung with spring clamp hinges (270) for marble, with reverse spring to hold door open if desired.

All cut-out boxes shall be hung with one pair butts (780)  $3 \times 3$  inches.

PIVOTS.—All doors 4 inches thick shall have extra heavy Steel Pivots top and bottom for each leaf to suit detail.

Locks.—All doors except main entrance, janitor's quarters, rooms 89-90 and doors 4 inches thick, shall have heavy cylinder office lock of Yale type (654) knob to operate latch at all times, and key to operate dead bolt from both sides; japanned iron case  $5\frac{1}{2} \times 3\frac{5}{8}$  inches, with armor plate for face, three keys each.

All entrance doors (4 inches thick) shall have cylinder lock Yale type (658), japanned iron case 6½×4 inches, with extra heavy reinforced face measuring 12×1¾ inches, and four screw holes.

Doors in rooms 89 and 90 (also janitor's quarters) shall have lock (1500)  $4\frac{1}{4} \times 3\frac{1}{2}$  inch case, with easy spring and three rolled polished steel lever tumblers, two nickel-plated forged steel keys each.

All single water closet doors shall have fiush rim lock  $4\frac{3}{8} \times 3\frac{3}{8}$  inches (1784), knob to operate latch both sides, key to operate dead bolt outside and thumb knob to operate dead bolt inside; to have three lever tumblers each, and

three forged steel keys, complete with knobs, thumb-knobs, roses, key plates and strikers, with rubber bumper for marble.

All double water closet doors to have extra heavy Brass Latch (1076 1/2). Cut-out boxes shall have suitable brass cabinet locks (PA200), flat key, 2 tumblers.

ESCUTCHEONS.—All doors (except main entrance and cut-out boxes, janitor's quarters and rooms 89 and 90) to have combined rose and escutcheons 6/6420,  $9\frac{1}{2} \times 2\frac{3}{4}$  inches, both sides of each leaf; double trim for double doors to measure  $9\frac{1}{2} \times 2\frac{3}{4}$  inches, square corner, wide bevel, and to have high bracket-bearing thimbles; janitor's quarters and rooms 89 and 90 to have escutcheons 3/6410, to measure  $6 \times 2$  inches, and to have bracket-bearing thimble knobs.

Knobs.—All knobs (except the janitor's quarters and rooms 89 and 90) shall be 2½ inches heavy cast metal, with the monogram U. C. set in suitable ornamental wreath, to have adjustable screwless spindles; janitor's quarters and rooms 89 and 90 shall have 2¼-inch solid bronze knob with screwless spindle.

Bolts.—Main entrance doors shall have extra heavy mortise top and bottom bolts, extending through the entire length of each leaf; same to be operated by heavy T-handle only and dead locked by key from inside only; two No. 186 bolts to each pair of doors. All doors 4 inches thick shall have two No. 988 bolts; all other double doors shall have two No. 283 bolts.

ADJUSTERS—All casement windows shall have adjusters. Those less than 4 feet 6 inches from floor to have adjusters No. 1395 (extra heavy with star section rod) of suitable length to swing sash at right angle. Those over 4 feet 6 inches from floor to have approved adjusters operated by ½ inch bronze rod; handle not to be more than 5 feet from floor.

CATCHES—All casement windows shall have extra heavy, easy spring, mortise latches with ringed lever handle or other device to enable latch bolt to be retracted by either string or pole hook from floor.

POLE HOOKS—Provide (ash) poles of suitable length with pole hook (1358).

Hooks—Provide and set (six) heavy coat hooks (513) in all closets, water closets and slop sinks and two by each wash-basin; to have expansion boits where marble is set.

Transoms—Provide and set two heave bronze transom lifts B166 to each opening for transom over vestibule.

Door Stops—Provide and set rubber tipped wooden door stops for all doors where wooden base, and metal door Stops 1109 with expansion bolts where marble or cement base.

## Example (e).

# LOCK SPECIFICATION USED FOR A LEADING NEW YORK HOTEL.

(Numbers refer to the Yale & Towne Mfg. Co.)

(Plan 2. Method A. Hardware specified definitely. See page 996.)

#### FOR SINGLE DOORS FROM CORRIDORS TO ROOMS

No. I Combination.—One No. 1685 two-bolt corridor lock, latch bolt operated by knobs from both sides; dead bolt operated by master-key and guest's key from hall side, and by guest's key only from inside; this lock master-keyed by floors; the change or guest's key to be all different throughout the building.

One No. 1050 thumb bolt on inside.

#### FOR DOUBLE DOORS FROM CORRIDORS TO ROOMS.

No. 2 COMBINATION.—Same arrangement of locks and keys as in Combination No. 1, except adapted to double instead of single doors.

## FOR SINGLE SLIDING DOORS FROM CORRIDORS OR PRIVATE HALLS TO ROOMS.

No. 3 Combination.—One No. 1706 1/2 lock with spring pull operated from face of lock; dead bolt operated from both sides by floor master-key and by guest's key.

One No. 1050S thumb bolt, operated from inside only.

## FOR DOUBLE SLIDING DOORS FROM CORRIDORS OR PRIVATE HALLS TO ROOMS.

No. 4 Combination.—Same arrangement of locks and keys as in Combination No. 3, except adapted to double instead of single sliding doors.

## FOR PUBLIC TOILETS, SLOP HOPPERS, FURNITURE CLOSETS AND SERVING ROOM.

No. 5 Combination.—One No. 1470 two-bolt lock; latch bolt operated from both sides by knobs; dead bolt from outside only by key, set to floor master-key only.

#### FOR BAGGAGE ROOM DOORS.

No. 6 Combination.—One No. 1000 latch, operated by knob from both

sides; one No. 344 Yale dead lock, operated by key from outside only; keys alike for all baggage rooms throughout the building.

#### FOR DOORS FROM PUBLIC TOILET INTO PUBLIC BATH ROOMS.

No. 7 Combination.—One No. 1470 two-bolt lock, operated by knob from both sides, and by floor master-key from outside only.

One No. 1050 thumb bolt, operated from inside only.

#### FOR SINGLE COMMUNICATING DOORS.

No. 8 Combination.—One No. 1525 three-bolt lock; latch bolt operated by knob from both sides and with two thumb bolts, one operated from each side.

One No. 1300 lock, set to floor master-key only and operated from one side only.

#### FOR DOUBLE COMMUNICATING DOORS.

No. 9 Combination.—Same as No. 8 Combination, except that locks are adapted to double doors with rabbetted joint.

#### FOR TWIN COMMUNICATING DOORS.

No. 10 Combination.—Each door to have one No. 1505 two-bolt lock; latch bolt operated by knob from room side and by lever handle from the other side, with thumb bolt operated from room side only; one door of each pair to have one No. 1300 dead lock set to floor master-key only, and operated from one side of door only.

#### FOR PRIVATE BATH-ROOM DOORS.

One No. 1402 three-bolts lock; latch bolt operated by knob from both sides; dead bolt operated by key from outside only; keys to be alike throughout the building and different from all other keys. Thumb bolt operated from inside only.

No. II Combination.—Note: The above applies (except where bath-room communicates with two other rooms, in which case each bath-room door to be trimmed with the No. 3 Combination.)

#### TO CLOTHES CLOSETS IN GUEST'S ROOMS.

No. 12 Combination.—One No. 1501 two-bolt lock; latch bolt operated by knob from both sides; dead bolt operated by guest's key of combination No. 1 from room side only; each lock on a floor to have a key differing from any other lock on same floor.

#### FOR SINGLE SLIDING COMMUICATING DOORS.

No. 13 Combination.—One No. 1704 1/2 lock, with spring pull operated from face of lock, and two thumb bolts, one operated from each side of door.

One No. 1300S dead lock, set to floor master-key only and operated by key from one side only.

FOR INNER OR VESTIBULE DOORS TO ROOMS NEAR ELEVATORS.

No. 14 Combination.—One No. 1000 knob latch, operated by knob from both sides.

FOR DOORS FROM BUTLER'S PANTRY TO GUEST'S ROOM.

No. 15 Combination.—One No. 1505 two-bolt lock, latch operated from both sides by knob and thumb bolt from room side only.

## Section 5.

## Grades and Numbers of Yale & Towne Line.

S a guide to the selection of Locks and Hardware proper for all conditions and uses, the following Classified Table has been compiled, in which the division into three grades is based on the conditions explained in Part II, Sec. 3 (page 117).

Except when otherwise specified the figures in each column indicate the catalogue numbers of The Yale & Towne Mfg. Co., and in such cases the grading is that of the makers; in other cases the grading is that which, without preference or prejudice, is believed fairly to conform to the facts.

By availing of the Numerical Index, page 1104, the detailed description of each article can readily be found, in case information is desired as to construction, dimensions or prices. In the case of ornamental hardware the design should be indicated by name, and in all cases the desired metal and finish should be indicated by the appropriate symbol (see pages 609 to 612). The catalogue numbers usually indicate only the size and mechanical features of the article, not the metal or finish.

#### ENTRANCE DOORS.

RESIDENCES-	Best. Medium. Common.
Butts,	750 780 47
Cylinder type,	234 1/2 726 750
Locks { Cylinder type, Lever-tumbler type,	2000 ½ P3510 P1842
Extension,	383 383 2383
Bolts {Extension,	283 481 2715
Push Buttons,	1416 1415 W3416
Door Stops,	1108 1103 2105
Door Checks (Blount),	See pages 786 to 788
Trim, as desired,	See Parts III, V and VII

ENTRANCE	DOORS-Continued	d.
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ENTRANCE DOOF	CS—Contin	ruea.	
RESIDENCES—Continued.	Best.	Medium.	Common.
Sliding Door Lock,	234S	246 1/2 5	246½S
Trim, for Sliding Door Lock,	800	800	800
IRON AND GRILLE DOORS-			
Butts, with Machine Screws,	750	750	750
Butts, with Machine Screws, Locks—Special,	234 1/2	726	726
PUBLIC BUILDINGS—			
Butts,	750	780	780
Store Door Type,	732	414	P2533
Locks Store Door Type,	658	654	660
(Extension,	186	188	888
Bolts { Extension,	283	481	2715
Door Checks (Blount),			
Door Stop, Metal,			
Kick Plates, if desired. Give size of			
Brass Guards, if desired. Give descript	tion and sta	te width of	door.
Trim, as desired,			
If Self-acting Butts are desired, see "			
also see "Double-acting Hinges,"			P.80 104/
and dee a deed a	1.8 77.		
DUTCH DOORS—			
Butts—2 pairs,	750	780	47
Bolt—Rabbeted,	493	494	494
or Latch—Rabbeted	1000R	P1702R	P1702R
and Brass Quadrant, if desired, .	Special.	Special.	Special.
(Upper half,	348	1200	1300
Knob Lock Upper half, Lower half,	726	750	P3510
or			
(Upper half,	348	1200	1300
Thumb Latch Upper half,	1122	P2025	P2025
Handle—Combining Both Thumb			
Latch and Dead Bolt—Plate cut			
through above Grip,	Selected.	Selected.	Selected.
or			

Lock—Upper half, . . . . . 348 1200 Original from the E.R. Butler & Co. Research Library

1300

## ENTRANCE DOORS-Continued.

ENTINITIEE BOOK	dontinueu.	
DUTCH DOORS-Continued.	Best. Mediun	n. Common.
Lift Latch,	1176 2020	2020
Door Knockers,	See pages 873 to	876
Hinge Plates,	See pages 847 to	869
MASONIC OR SECRET SOCIETY LODGE	ES—	
Butts,	750 780	47
Locks,	726 750	
Trim—Masonic Emblem,	See pages 582 to	
Peep Hole,		
Door Knocker,		
STORE DOORS— SINGLE—		
Butts,	750 780	47
Locks—Cylinder,	732 414	
Handles, as desired,		
Door Checks (Blount),		
Letter Hole Plate,	1505 1507	745
" with Hood, .		
DOUBLE—		
Same as above but with dummy trim		
Bolts Extension,	186 188	888
Flush,	283 481	2715
APARTMENTS FROM PUBLIC HALLS-		
Sliding Door Latch,	66S 66S	66S
Trim,	827 827	827
BARNS—		
Locks,	246 1/s 274S	2111/5
Trim,	800 800	800
DOUBLE ACTING—		
SINGLE— Spring Hinges, A	merican or Rommer	Innannad
or Pivots		
(Plain.	See pages 802 and	802
Push Plates, {Plain, Ornamental,	See page 022	3
Kick Plates, if desired		
	1 8 7 5 5 6	

## ENTRANCE DOORS-Continued.

DOUBLE ACTING—Continued.  IN PAIRS—	Best.	Medium.	Common.
Spring Hinges,	American o	r Rommer	Iananned
or Pivots,			2
	And the Angel Control		
Bolts: Flush,			
Push Plates, {Plain, Ornrmental, .	See pages	802 and 80	93
Kick Plates, if desired			
Locks,			
SINGLE ACTING—	31174		,
Same as above, but with			
Door Check (Blount)	See nages	786 to 788	
Pull Handle (1 side)			
Push Plate (1 side)			
IN PAIRS—	-/3-		20/30
Same as above, but with			
2 Checks (Blount),	See pages	786 to 788	3
Duplex Stop,			
Butts,			
Kick Plates, if desired			
STORM DOORS—			
Butts,	750	780	780
Push Plates, Plain, Ornamental, .	See page	02.2	3
			5
Door Pulls, { Plain, Ornamental, .	See pages	822 to 84	,
Door Checks (Blount)			
Door Checks (Blount)	See pages	5 /00 10 /00	
SCREEN DOORS—			
Butts,	350	785	147
Latch,	866	1012	530
Door Checks (Blount)	 See pages	786 to 788	3
VESTIBULES—			
Butts,	750	780	47
(Cylinder type,	274 1/2	766	790
Locks, Lever-tumbler type, .	2200 1/2	P35101/2	P1742
(Extension,	383	383	2383
Butts,	283	481	2715
The Transaction of the Control of th			T-1011 - 11 11 11 11

ENTRANCE DOORS—Continued	ENTR	ANCE	DOORS-	-Continued
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ENTRANCE DOO	NS—Continuea.
VESTIBULESContinued.	Best. Medium. Common.
Door Stop,	1108 1103 2105
Door Checks (Blount),	See pages 786 to 788
Sliding Door Locks,	274S 274S 274S
Trim, for Sliding Door Lock,	800 800 , 800
INSIDE D	oors.
BATH ROOMS—	
Butts,	750 780 47
Locks,	1525 P2405 P118
Trim, as desired,	See Parts III, V and VII.
BED ROOMS—	
Butts,	750 780 47
Locks With Thumb-Bolts,	1402 P2535 P5918½
or Locks Without Thumb-Bolts,	1500 P2430 P291834
Trim, as desired,	See Parts III, V and VII.
CLOSETS—	
Butts,	750 780 47
Locks,	1500 P2430 P291834
Coat Hooks,	513 2513 2513
Ceiling Hooks,	713 2713 2713
Trim, as desired,	See Parts III, V and VII.
COMMUNICATING DOORS—	
Butts,	750 780 47
Locks,	1504 P2400 P1181/2
Trim, as desired,	See Parts III, V and VII.
SLIDING DOORS—	
Single,	1704 1/2 1704 1/2 1704 1/2
Lock Single,	1704 1704 1704
Double Astragal,	1724 1724 1724
Trim, as desired,	See Parts III, V and VII.
DOUBLE DOORS—	
SINGLE FOLD—	0
Butts,	750 780 47
Bolts,	188 184 184
or Two Bolts,	383 383 383
" "	283 481 2715
Locks, Flat or Rabbeted, as desired.	0 0
Trim, as desired,	See Parts III, V and VII.

INSIDE DOOR	S-Continue	ed.	
DOUBLE DOORS-Continued	Best.	Medium.	Common.
DOUBLE FOLD—			
Trim as for "Single Fold" except			
Folding Leaf Bolts,	350	785	147
Bolts,			
Active Leaf Cup—One Side, or Drop Ring Handle, .	800	800	800
(Drop Ring Handle, .	1094	1094	1094
ELEVATORS-			
Sliding Door Lock,	1792	1792	1792
LINEN CLOSETS—See Closets, page 1049.			
MEDICINE CLOSETS—See Cabinets, page	1051.		
SLIDING DOORS—			
Lock Single,	17061/2	P39121/2	SB39121/2
Lock   Double Flat,	1706	P3924 1/2	SB39241/2
Double Astragal,	1726	P3936 1/2	FB39361/2
Single,			
Latch Double Flat,			
Double Astragal,	68	68	68
Trim, as desired,	See Parts	s III, V an	d VII.
SLOP SINK CLOSETS—See Closets, page I			
	049.		
WINE CELLARS—			
Butts,	780	47	239
Latch,	344	66	042
WATER CLOSET STALLS—			
WITH MARBLE PARTITION—			
Spring Butts, as desired.			
Indicator Bolt, {Mortise,	1087	1087	1087
등에 가는 사람들은 아니는 사람들이 있는 것이 되었다면 하는 것이 없는 것이 없는데 없는데 없었다.	1086	1086	1086
Strike for above,	IIII	IIII	IIII
or Slide Bolt,	1075	1075	1075
or Knob,	1780	1780	1780
Knob Bolt Strike,	IIII	IIII	1111
or Knob Lock,	1784	1784	1784
Knob Lock Strike,	Special.	Special.	Special.
or Bar Latch,	1076	1076	1076

## INSIDE DOORS-Continued.

INSIDE BOOK	o Gontinue		
WATER CLOSET STALLS—Continued—			
WITH MARBLE PARTITION	Best.		Common.
Door Pulls,		201	
Coat Hook: for marble,	1603	413	513
WITH WOOD PARTITION—	was and Wass	l C	h
Same as above, except regular Strike	es and vv ood	1 Screws th	roughout.
YACHT CABINS—	0 (	0 (	0 (
Sliding Door Lock,			
Trim, as desired,	See Part	s III, V an	id VII.
MISCELLANEO	US DOOR	S.	
ASYLUMS—			
See Asylum Locks, page 218.			
BOOKCASES—			
Butts,		Many and the state of the state	
Bolts, if desired,			
Locks,	PA150	PA150	PA150
Keys and Key Plates, as desired, .	See pages	678 and 9	52.
Hinge Plates, if desired.			
BUFFETS-			
Butts,	785	147	289
Latch,	917	917	917
Hinge Plates, if desired.			
CABINETS-			
Butts,		160	241 1/2
Cupboard   Locks,	PA75		
Turn,		2502 1/2	2502 1/2
CARRIAGE WAYS—			
Sliding Door Lock,	304S	344S	344S
COAT ROOM—			
GATE AND COUNTER LID—			
Hinges (For Gate)		750	750
Butts (For Lid),			150
Latch,		66	
Elbow Catch,			
Roller Support,	Special.	Special.	Special.
CUT-OUT BOXES -			.,
Butts,			
Lock,			
Keys and Key Plates, as desired,	See page	s 678 and 9	952.

## MISCELLANEOUS DOORS -- Continued.

HOTELS—GUEST ROOM DOORS—		Medium.	
Locks,		641 to 644	
Butts,		780	
Trim, as desired	See Parts	III, V and	V11.
JIB HEAD DOORS—			
Butts,	750	780	47
Bolts (Lower pair)	188	283	383
" (Upper pair), Cross Bolts and	Special		
2 Upper Bolts		283	383
Hooks,	1358	1358	1358
Angle pieces (Brass), if desired,		Speclal	Special
Locks, as desired.			
Trim, as desired.			
Butts,	785	147	150
	6000	147	
Locks,		533	
Coat Hooks,	413	413	2413
OFFICES, CORRIDOR DOORS-			
Butts,	750	780	47
Locks (Cylinder type),	6614	654	660
" (Lever tumbler type),	1442	1500	P291834
Latches (Cylinder type),	6274	790	790
" (Hinged bolt),	656H	770H	770H
Letter Hole Plate,	1505	1507	745
" " with Hood .	1506	1508	747
Door Check (Blount), if desired, .	See page	s 786 to 788	
Trim, as desired.			
OFFICE GATES—			
Hinges, as desired.			
	4310	4310	4305
	тэ	73	T3~3
PANTRY DRESSERS—			
Butts,	780	47	241 1/2
Cupboard Turns,	1089	500 1/2	
Catches, Elbow,	11911/2	2191	2191
Brass Track, as required.			
Brass Sheaves, as required.			
OLIVE TO D.H.	. 0 C- D	avala I Hamana	

MISCELLANEOUS DO	ORS—Continued.
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PRISON LOCKS—See page 219.	Best.	Medium.	Common.
SAFE LOCKS—See page 220.			
SAFE DEPOSIT LOCKS—See page 222.			
SECRET DOORS—			
Walking Beam Pivot,	Special.	Special.	Special.
Operated on One Side or Both, by			
Sliding Lock, complete,	1708	1708	1708
		1/08	1/08
SUB-TREASURY LOCKS-See pages 223	and 674.		
WARDROBES—			
Butts,	750	780	47
Bolts (if double doors)	280	480	480
Locks, Flush Rim,	1785 li	ne 1785	1785
Locks Mortise,	1644	" 1644	1644
Cabinet,	PA150	PA150	PA150
Hooks, as desired	See page	s 794 and 7	95
Trim, as desired,			
WINDO	WS		
BOX HEAD WINDOWS—	W 5.		
	1349L	1344L	W1400
Sash Lift and Lock {Flush, Hook,	1339	1339	1339
(Rim,	912	912	912
Sash Lock Rim,	914	914	914
DOUBLE HUNG WINDOWS—			
Sash Fast,	1275	1272	W1400
Sash Lift { Flush,	01	1242	W 5 3 4 3
Sash Pull,	1262	201	215
Sash Sockets,			
Sash Bead Screws and Washers, .			
Sash Pole Hook,			
			-330
DOUBLE HUNG WINDOWS, WITH T			1054
For Top Sash Opening Dozon, .			
For Bottom Sash Opening Up,			
Sash Pole Hook,	1350	1350	2350

WINDOWS-	-Continued		
FRENCH CASEMENTS, DOUBLE-	Best.	Medium.	Common.
WITH JAM JOINT-			
Butts,	750	780	47
Bolt—Cremorne,	893	893	893
WITH RABBETED JOINT-		0	
Butts,	750	780	47
Bolts,	280	480	2715
Bolt—Cremorne,	893	893	893
Adjusters,	1395	1386	2386
Omit Flush Bolts and use Two			
Cremorne Bolts,	802	893	893
	893	093	093
Or Use Fleeb Polts	282	. 9 .	2715
Use Flush Bolts,	283	481	2715
and .	- 0	.0.	.0.
Locking Top, Bottom and Centre,	384	384	384
or	0	0	•
Flush Bolts,	283	481	2715
and			
Mortise Espagnolette Bars,	183	183	183
or			
Rim Espagnolette Bars,	881	881	881
or			
Turnbuckles, as desired,	See pages	816 and 8	317
FRENCH CASEMENT, SINGLE-			
Similar to above, but omitting Flush	Bolts		
HINGED WINDOWS—			
AT SIDE OPENING OUT—			
Butts,		785	147
Turnbuckles, as desired	See pages 8	816 and 81	7
Adjusters,	See pages	778 to 781	
AT SIDE OPENING IN-			
Butts,			47
Turnbuckles, as desired		816 and 8	
Adjusters, { For Sill,	1393	1393	1393
	1394	1394	1394
AT TOP OPENING OUT—		0	
Butts,			147
Adjuster and Fastening,	1388	1388	1388
Original from the E.R. Butler &	& Co. Researc	h Library	

WINDOWS—	-Continued.				
HINGED WINDOWS-Continued.  BASEMENT OR CELLAR-	Best.	Medium.	Common.		
Butts,	785	147	Steel.		
Buttons on Plates,	Brass.	Brass.	Japanned.		
Hooks and Eyes,	"	"	Bright Wire.		
or Bolts in place of Buttons, .	1680	1680	Japanned		
JIB WINDOWS TO PORCH—					
Same Trim as for Double Hung Win	ndows				
Butts,	750	780	47		
Bolts,	280				
Latch,					
Trim, as desired (one side only).	1000	1000	300/2		
PIVOTED WINDOWS—					
Rabbeted,	1335	1345	1345		
Pivots, {Rabbeted,	1355	1355	1355		
Turnbuckles, as desired					
Adjusters, as desired	See pages	778 to 7	81		
Catches, as desired	See pages	782 to 7	85		
DRAWERS.					
DESK OR TABLE—					
Lock, as desired,	See pages	See pages 674 to 678			
Key and Key Plate, as desired.	See pages	See pages 678 and 952			
Drop Drawer Handles or Pulls or		See pages 925 to 939			
(Glass, as desired	See pages	See pages 947 and 948			
Knobs, {Glass, as desired	See pages	See pages 796 and 940			
LINEN CLOSET—					
Drawer Pulls, as desired	See pages	025 to 0	20		
Brass Rollers and Brass Track, if de		923 10 9.			
MISCELLAN					
DROP LIDS—	VEOUS.				
Butts,	150	150	150		
Stay Arm,	1165	1161	1161		
Glass, as desired.	See pages 946 to 951				
Knobs, {Glass, as desired	See pages 796 and 940				
Original from the E.R. Butler &					

## MISCELLANEOUS—Continued

INSIDE SHUTTERS—	Best.	Medium.	Common.
Butts,	150	150	150
Flaps,	50	50	50
Angle Flaps, to suit details	60	60	60
Bars,	1382	1384	W230
(Glass, as desired	See pages 946 and 947		
Knobs, {Glass, as desired	See pages 796 and 940		
TRANSOM LIGHTS-			
PIVOTED—			
Pivots, Rabbeted,	1335	1335	1335
Flat,	1355	1345	1345
Transom Lifters, as required	See page	813 to 815	
HINGED—			
Butts,	785	147	147
Transom Lifters, as required,	See page 813 to 815		
or			
Hinges (or Pivots), and			
Transom Catches,	1186	1187	2605
Chains,	1332	1332	1332
Transom { Chains,			
Stays,	1165	1161	1161
WINDOW SEATS			
Butts,	150	150	150
Catch,	1092	1092	1092