GGG-H-86c
March 8, 1963

SUPERSEDING
Int. Fed. Spec. GGG-H-0086b(Navy-Ships)
July 6, 1959 and
Fed. Spec. GGG-H-86a
July 6, 1955

FEDERAL SPECIFICATION

HAMMER, HAND, (FORGED STEEL HEAD)

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers forged steel hammers used for driving nails, hammering metal, breaking stone, and similar uses.

1.1.1 *Federal specification coverage.* Federal specifications do not cover all types, classes, and styles of the commodity as indicated by the titles of the specifications, but include only those generally used by the Federal Government.

1.2 Classification.

1.2.1 *Types, classes, and styles.* Hammers shall be of the following types, classes, and styles as specified (see 6.1):

Type I.—Carpenters'.
  Class 1.—Nail, curved claw.
    Style A.—Hickory handle, medium-fine, bright-polish finish.
    Style B.—Steel or fiberglass handle, medium-fine, bright-polish finish.
  Class 2.—Ripping, straight claw.
    Style A.—Hickory handle, medium-fine, bright-polish finish.
    Style B.—Steel or fiberglass handle, medium-fine, bright-polish finish.
Type II.—Machinists'.
  Class 1.—Ball peen.
    Style A.—Hickory handle, polished face and peen.
    Style B.—Steel or fiberglass handle, polished face and peen.
  Class 2.—Riveting.
Type III.—Bricklayers'.
  Style A.—Hickory handle.
  Style B.—Steel or fiberglass handle.
Type IV.—Farriers', driving (shoeing).
Type V.—Geologists' (prospecting pick).
Type VI.—Scaling (boiler pick).
Type VII.—Shoemakers'.
  Class 1.—Rough face.
  Class 2.—Smooth face.
Type VIII.—Trimmers'.
  Class 1.—Tack, nonmagnetized.
  Class 2.—Tack, magnetized.
  Class 3.—Upholstering.
Type IX.—Tinners'.
  Class 1.—Riveting.
  Class 2.—Setting (paneing).
Type X.—Blacksmiths' or Engineers'.
  Class 1.—Double face.
  Class 2.—Cross peen.
  Class 3.—Straight peen.
Type XI.—Stoneworkers'.
  Class 1.—Hand drilling.
    Style A.—Long pattern.
    Style B.—Short pattern.
  Class 2.—Striking (drilling).
    Style A.—Long pattern (Nevada drill).
    Style B.—Short pattern (Oregon drill).
  Class 3.—Napping.

Class 4.—Masons'.
Class 5.—Spalling.
Style A.—Double face.
Style B.—Single face.
Class 6.—Stone sledge.
Type XII.—Maul, ship (top).
Type XIII.—Maul, spike (railroad).
Type XIV.—Maul, woodchoppers', (Oregon pattern).

2. APPLICABLE SPECIFICATIONS, STANDARDS, AND OTHER PUBLICATIONS

2.1 Specifications and standards. The following specifications and standards, of the issues in effect on date of invitation for bids, form a part of this specification:

Federal Specification:

NN-H-93—Handles; Hickory, Striking Tool.

Federal Standards:

Fed. Std. No. 102—Preservation, Packaging, and Packing Levels.
Fed. Std. No. 123—Marking for Domestic Shipment (Civilian Agencies).
Fed. Std. No. 151—Metals; Test Methods.

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications, Standards, and Handbooks and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

(Single copies of this specification and other product specifications required by activities outside the Federal Government for bidding purposes are available without charge at the General Services Administration Regional Offices in Boston, New York, Washington, D. C., Atlanta, Chicago, Kansas City, Mo., Dallas, Denver, San Francisco, and Auburn, Wash.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications, Standards, and Handbooks from established distribution points in their agencies.)

Military Specifications:

MIL-P-116—Preservation, Methods of.
MIL-H-15424—Hand Tools; Packaging of.

Military Standards:

MIL-STD-105—Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-130—Identification Marking of U. S. Military Property.

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids shall apply.

Department of Commerce:

Simplified Practice Recommendation R77-45.

(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, Washington 25, D.C.).

3. REQUIREMENTS

3.1 Illustrations. The illustrations shown hereinafter are for the convenience of identification and are not intended to preclude the purchase of hammers, which are otherwise in accordance with the requirements of this specification.

3.2 Material. The material shall be as hereinafter specified for the individual types.

3.2.1 *Heads.* The heads of all hammers shall be forged in one piece of a suitable alloy or carbon steel. The chemical composition and the tempering techniques employed shall be such as to produce tools that conform to this specification. They shall conform to the hardness requirements specified for the individual types, classes, and styles and shall successfully perform the applicable tests specified in section 4. Striking faces shall be uniform across the surface and free from irregular and unfinished areas. The surface of the striking faces shall be either flat or convex, except where flat faces or convex faces are definitely specified under the individual type, class, or style herein. Flat faces shall be free of curvature. All forging flash on the polls and in the eye area shall be removed and blended even with the forged surface.

3.2.1.1 *Chemical properties.* When carbon-steel heads are furnished, the steel shall conform to the chemical requirements specified in table I.

Table I - Chemical properties of carbon steel heads.[1]

Element	Minimum	Maximum
	Percent	Percent
Carbon	0.46	0.85
Manganese	.20	.90
Phosphorus	----	.04
Sulphur	----	.05
Silicon	.10	.30

[1] Chromium, Molybdenum, Nickel, Vanadium - No requirement.

3.2.2 *Handles.*

3.2.2.1 *Hickory handles.* Hickory handles, except types VII and VIII, shall conform to NN-H-93 for the type and size specified except that the handles may be flame treated or color stained and shall be coated with a transparent lacquer that does not conceal the annual rings of growth and the grain of the wood. Handles for types VII and VIII shall be grade B or better as specified in Simplified Practice Recommendation R77-45.

3.2.2.2 *Steel handles.* Hammers with steel handles shall be a forged or welded extension of the head or shall be seamless or welded steel tubing securely fastened to the head by pins, swaging, silver braze, chemical adhesive, or tubular steel handles may be secured in heads having conventional eyes by internal expansion in such a manner that the handle will not loosen under any working condition. There shall be no openings between the handle and head where the eye for the wood handles is normally located. At least 6-1/2 inches of the length from the gripping end shall be built up of flat individual leather washers or shall be covered with rubber, fiber, neoprene, vinyl, vinyl nylon, or other comparable material except for type II hammers. Type II hammer handles shall be covered only by leather, vinyl, vinyl nylon, neoprene, or a comparable material that will minimize deterioration due to action of oil or grease. The leather washers shall be flat, elliptical shaped, and of a good grade of sole leather or similar material. They shall be not less than 1/8 inch thick. The grip material shall be permanently and securely attached to the metal handle and shall be smoothly finished and conform generally to the finished size and shape as the same type and size specified in NN-H-93 for wood handles. Tubular steel handles shall be subjected to the pull apart test specified in 4.4.6.

3.2.2.3 *Fiberglass-reinforced plastic handles.* Fiberglass-reinforced plastic handles shall be well proportioned and shall be molded of a thermo-setting-type plastic containing a minimum of 60 percent fiberglass by weight. Glass filament fiber orientation shall be unidirectional and longitudinal and fibers shall be continuous. Fiberglass-reinforced plastic handles shall be inserted and bonded by means of a chemical adhesive or otherwise affixed in eyes of tool heads in such a manner that the handle will not loosen under any working condition. There shall

be no openings between the handle and head where the eye for the wood handle is normally located. The grip portion shall be covered with rubber, neoprene, or other comparable material. The eye section of the handle may be secured or bonded to the head by means of a chemical adhesive conforming to 3.2.4.

3.2.3 *Wedges.* Handles secured by wedges shall be secured with one or more metal wedges or metal screws without or in combination with wood wedges. Wedges and screws shall be driven or screwed, respectively, flush within plus or minus 1/32 inch with the front surface of the tool eye except that no plus tolerance will be permitted for type I carpenters' claw hammers. The wedge, wedges or screws, or a combination of the same, shall create sufficient expansion to completely fill the tool eye and tightly wedge the handle in the eye of the hammer, so as to minimize the head from working loose under the most severe working conditions. The screws shall be of the tapered, headless types.

3.2.4 *Chemical adhesive bond.* Handles secured by chemical adhesive bond shall be securely bonded to the head by means of a chemical adhesive that will prevent the handle from loosening under any normal working conditions. Hammers having such chemical adhesive shall be subjected to the pull-apart test specified in 4.4.6.

3.3 Design. The hammers shall be of the latest design, convenient to use and entirely adequate for the purpose intended. The shape of the head shall be substantially in agreement with the applicable figure. Body corners and edges shall be chamfered in accordance with standard commercial practice unless square edges are specified under the individual type or class of hammer.

3.3.1 *Eyes.*

3.3.1.1 *Tools with hickory handles.* The head shall be provided with any eye which shall extend through the head and in which the handle shall be fitted. Eyes shall have an inward taper at an angle of approximately three degrees to permit proper wedging.

3.3.1.2 *Tools with steel handles.* Hammer heads with forged steel handles shall be either forged or welded integrally with the head, forming a full-length handle. Hammer heads with tubular steel handles shall have either an eye as specified in 3.3.1.1, a forged extension of the head, or a hole shall be drilled or reamed approximately three-quarters of the distance through the head in the place where the eye is normally located.

3.3.1.3 *Tools with fiberglass-reinforced plastic handles.* Hammer heads with fiberglass-reinforced plastic handles shall have either an eye as specified in 3.3.1.1, or a hole shall be drilled or reamed approximately three-quarters of the distance through the head in the place where the eye is normally located.

3.3.1.4 *Eye numbers.* The eye number specified for individual types shall be in substantial agreement with the respective eye number shown on figure 1. (Eye numbers do not apply to some tools with steel or fiberglass handles.) Dimensions of eyes are measured from the back side of the hammer head.

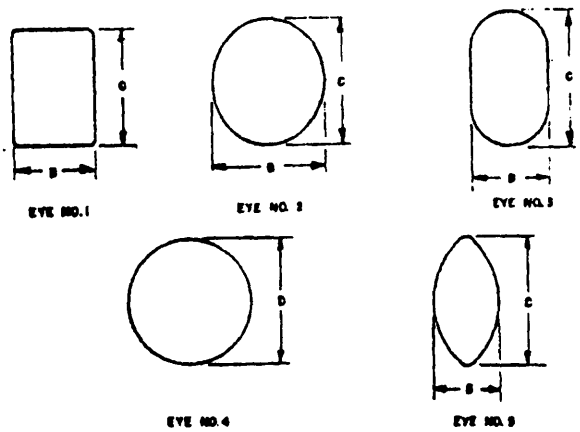

FIGURE 1.—Eye numbers.

3.3.1.4.1 Slight variations in the eye designs will be acceptable provided that replacement handles in accordance with NN-H-93 can be driven "home" into the hammer eye without modification of the tapered sides or other portions of the handle, except to cut away the excess length beyond the head of the assembled hammer.

3.3.1.5 *Eye hardness.* All hammers shall possess a hardness at the eye of not more than 26 on the Rockwell C scale when tested as specified in 4.4.1.

3.4 Finishes.

3.4.1 *Medium-fine, bright-polish finish, 80-grit.* A medium-fine, bright-polish finish shall be a smoothly ground surface. The surface appearance of the finish shall not be coarser than that resulting from the use of an 80-grit abrasive wheel.

3.4.2 *Medium-ground finish, 60-grit.* A medium-ground finish shall be a smooth-ground finish, free from deep scratches and excessive roughness. The surface appearance of the finish shall not be coarser than that resulting from the use of a 60-grit abrasive wheel. Except where a specific finish is specified under individual hammers, the faces or finished parts on all hammers, mauls, and sledges under 4 pounds shall have a medium-ground finish.

3.4.3 *Medium-coarse-ground finish, 46-grit.* A medium-coarse-ground finish shall be a ground finish not coarser than that resulting from the use of a 46-grit abrasive wheel. Except where a specific finish is specified under individual hammers, the faces or finished parts on all hammers, mauls, and sledges 4 pounds and over shall have a medium-course-ground finish.

3.4.4 *Coarse-ground finish, 30-grit.* A coarse-ground finish shall be used to remove excessive roughness such as flash and fins from forged surfaces. This finish shall not be coarser than that resulting from the use of a 30-grit abrasive wheel.

3.4.5 *Natural finish.* A natural finish shall be an even (natural) forged surface, free from fins, scale, or rust. The flash line shall be removed sufficiently to blend smoothly with the adjacent surface or it shall be removed completely. This finish may be attained by grit blasting, tumbling, grinding, machining, or a combination thereof.

3.4.6 *Enameled coating.* An enameled coating shall be a waterproof paint or enamel applied to the metal surface. The coating shall not be tacky nor flake off readily.

3.4.7 *Clear-lacquer coating.* A clear-lacquer coating shall be a clear lacquer or other equally suitable transparent coating applied to either the metal or entire surface to deter rusting in transit or in short term storage. In application, the clear lacquer coating may extend over other surfaces of the hammer but shall not be substituted for another specified coating.

3.5 Sizes. The sizes of the hammers shall be as hereinafter specified.

3.6 Weight. The weight specified for the individual types shall be exclusive of the handle.

3.7 Hardness. The hardness of faces and other portions of the tool specified hereinafter shall be exclusive of casehardened surfaces if any (see 4.4.1).

3.8 Peens.

3.8.1 Peens shall be symmetrically located with respect to the axis of both the head and the handle. The run of the peen shall be free from deviations from straightness. Except as hereinafter specified, ends of peens shall be round and smooth with no sharp edges.

3.8.2 *Straight peens.* Straight peens shall be parallel to the longitudinal axis of the handle.

3.8.3 *Cross peens.* Cross peens shall be at right angles to the longitudinal axis of the handle.

3.9 **Identification marking.**

3.9.1 *Civil agencies.* Each hammer shall be permanently and legibly marked on the head with the manufacturer's name or with a trademark of such known character that the source of manufacture may be readily determined, except that marking may be on the steel portion of handles forged integrally with the head.

3.9.2 *Military departments.* Each hammer shall be permanently and legibly marked on the head in accordance with MIL-STD-130, with the manufacturer's name or with a trademark of such known character that the source of manufacture may be readily determined except that marking may be on the steel portion of handles forged integrally with the head.

3.10 Type I, carpenters'. Type I hammers shall have a striking head on one end for driving nails and a claw on the opposite end for removing brads and both headed . . headless nails. The face shall be hardened to not less than 50 nor more than 60, the claw not less than 40 nor more than on the Rockwell "C" scale (see 4.4.1). The extreme end where the claw terminates shall have a thickness of between 1/32 and 1/16 inch. The claws shall be the same length and width within 1/32 inch. The face shall be chamfered for a width equal to approximately 10 percent of its diameter. The face shall be either parallel to the axis of the handle or toed-in toward the handle up to a maximum of 4 degrees. The terminology used for type I hammers shall be in accordance with figure 2.

3.10.1 *Class 1, nail, curved claw.* Class 1 hammers shall have a curved claw.

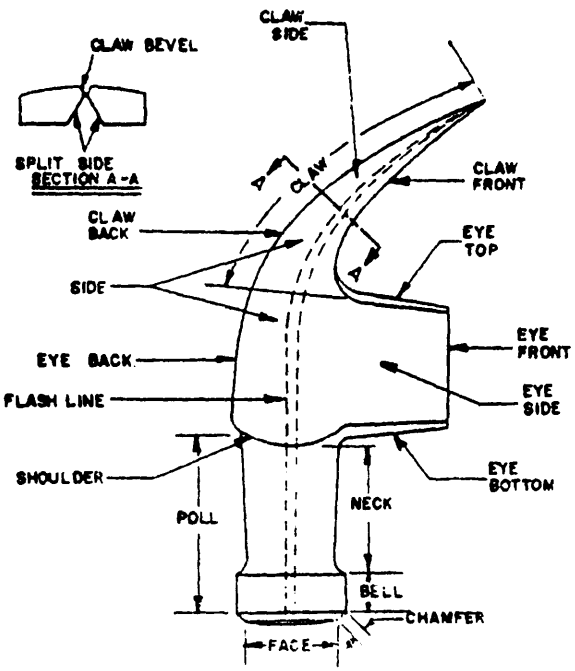

FIGURE 2.—Terminology on type I, carpenters' hammer.

3.10.1.1 *Style A, hickory handle, medium-fine finish.* Style A hammers shall have a hickory handle conforming to 3.2.2.1. The head shall have either an octagon or round bell and neck. Hammers shall be finished as follows unless otherwise specified (see 6.1): Hammers with round or octagon bells or necks shall be finished to conform to 3.4.1 and 3.4.7 except for the following: The bottom and top of the eye and front of the claw shall be finished to conform to 3.4.5 and 3.4.6. Round necks shall be finished to conform to 3.4.3 and 3.4.6, octagon necks shall be finished to conform to 3.4.4 and 3.4.6. On hammers with an octagon bell, the four dimensions across the flats of the bell shall measure the same within 1/32 inch. On hammers with a round bell, the bell and chamfer shall be round within 1/32 inch with no flattened area deeper than 0.015 inch. Style A hammers shall conform to table II and shall be similar to any option of figure 3.

Table II - Type I, class 1, style A, carpenters, nail, curved claw, hickory handle, medium fine bright polish finish.

Weight	Diameter of head at face +1/8 -1/16	Handle length, overall ±3/4	Eye		
			Number	Dimensions, minimum	
				B	C
Ounces	Inches	Inches		Inch	Inches
7 ± 1	3/4	12	1	5/16	3/4
13 ± 1-1/2	15/16	13	1	7/16	1
16 ±2	1- 1/16	13	1	17/32	1-1/32
20 ±2	1- 1/8	13-1/2	1	17/32	1-1/32

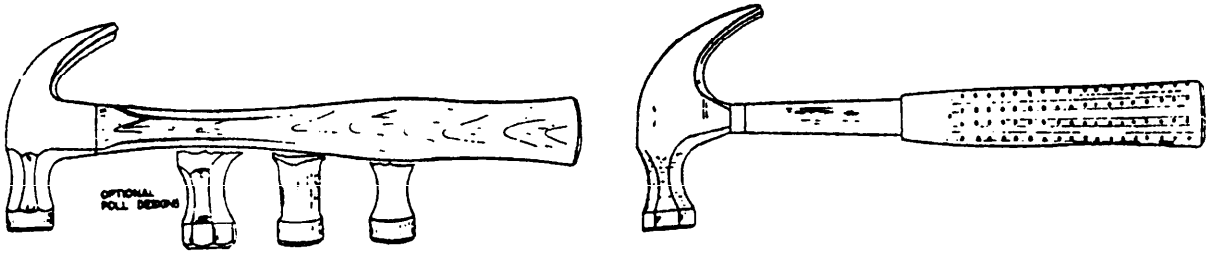

FIGURE 3.—Type I, class 1, style A, carpenters', nail, curved claw, hickory handle, medium-fine, bright-polish finish.

3.10.1.2 *Style B, steel or fiberglass handle, medium-fine finish.* Style B hammers shall have a steel handle conforming to 3.2.2.2 or a fiberglass handle conforming to 3.2.2.3. The heads shall conform to 3.10.1.1. Style B hammers shall conform to table III and shall be similar to any option of figure 4.

Table III - Type I, class 1, style B carpenters, nail, curved claw, steel or fiberglass handle, medium fine bright polish finish.

Weight ±2	Diameter of head at face +1/8, -1/16	Handle length, overall ±3/4
Ounces	Inches	Inches
13	15/16	12-1/2
16	1- 1/16	13
20	1- 1/8	14

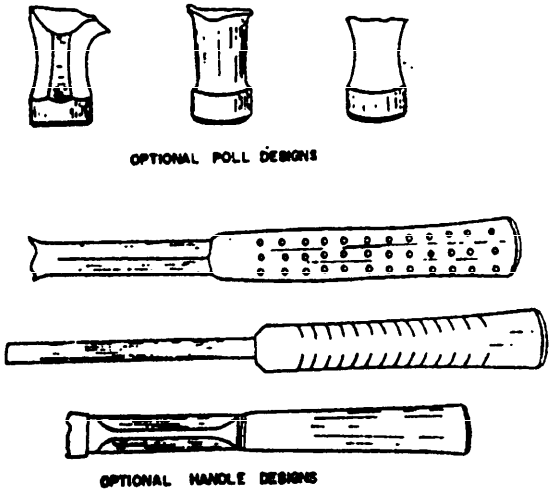

FIGURE 4.—Type I, class 1, style B, carpenters', nail, curved claw, steel or fiberglass handle, medium-fine, bright-polish finish.

3.10.2 *Class 2, ripping.* Class 2 hammers shall have a straight claw.

3.10.2.1 *Style A, hickory handles, medium-fine finish.* Style A hammers shall

Table IV - Type I, class 2, style A, carpenters, ripping, straight claw, hickory handle, medium fine bright polish finish.

Weight	Diameter of head at face +3/16 -1/16	Handle length, overall ±3/4	Eye		
			Number	Dimensions, minimum	
				B	C
Ounces	Inches	Inches		Inch	Inches
16 ± 1-1/2	1-1/16	13	1	17/32	1-1/32
20 ± 2	1-1/8	13-1/2	1	17/32	1-1/32

have hickory handles conforming to 3.2.2.1. The heads shall conform to 3.10.1.1. Style A hammers shall conform to table IV and shall be similar to any option of figure 5.

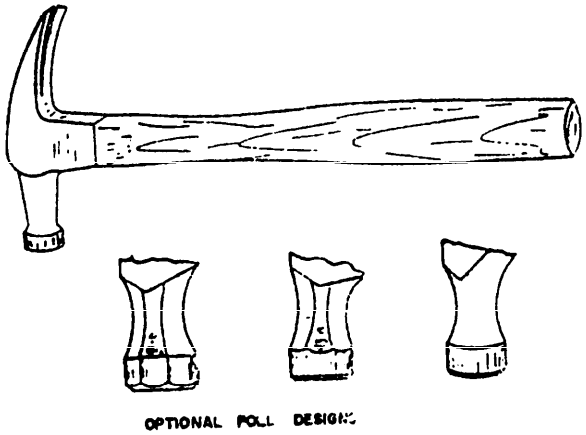

FIGURE 5.—Type I, class 2, style A, carpenters', ripping, straight claw, hickory handle, medium-fine, bright-polish finish.

3.10.2.2 *Style B, steel or fiberglass handle.* Style B hammers shall have a steel handle conforming to 3.2.2.2 or a fiberglass handle conforming to 3.2.2.3. They shall have heads conforming to 3.10.1.1. Style B hammers shall conform to table V and shall be similar to any option of figure 6.

Table V - Type I, class 2, style B, carpenters, ripping, straight claw, steel or fiberglass handle medium fine bright polish finish.

Weight	Diameter of head at face +3/16, -1/16	Handle length, overall ±3/4
Ounces	Inches	Inches
16 ± 1-1/2	1-1/16	13
20 ± 2	1-1/8	14

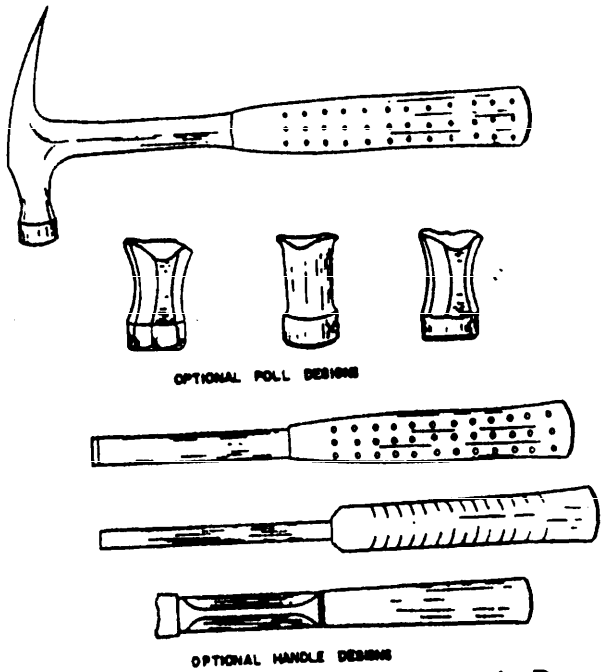

FIGURE 6.—Type I, class 2, style B, carpenters', ripping, straight claw, steel or fiberglass handle, medium-fine, bright-polish finish.

3.11 **Type II, machinist.**

3.11.1 *Class 1, ball peen.* Class 1 hammer heads shall have a round bell with a slightly convex face on one end. The bell

and chamfer shall be round within 1/32 inch with no flattened area deeper than 0.015 inch. The other end shall have a hemispherical ball peen. The face shall be chamfered for a width equal to approximately 10 percent of its diameter. The necks shall be of any of the following shapes: Round, octagonal, combination of round and octagonal, or any similar cross-sectional shape which will not unbalance the hammer. The faces and peens shall be hardened to not less than 50 nor more than 57 on the Rockwell "C" scale (see 4.4.1). Hammers shall withstand the tests specified in 4.4.2 and 4.4.6, where applicable. The terminology for class 1 hammers shall be in accordance with figure 7.

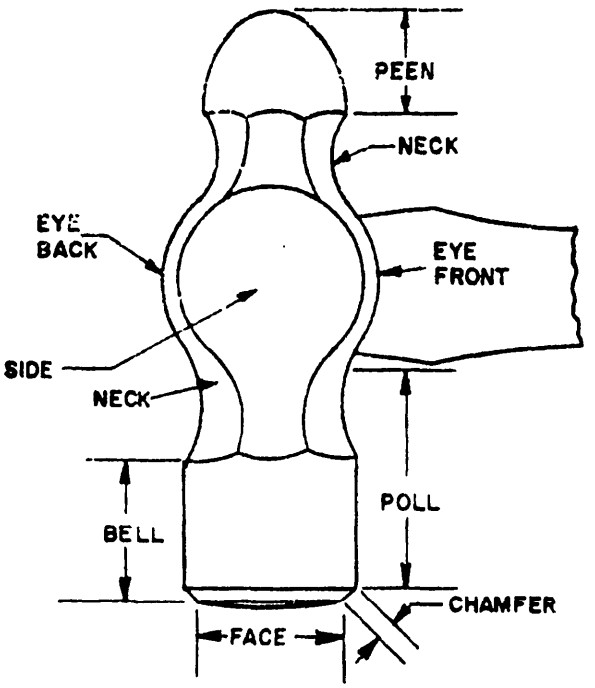

FIGURE 7.—Terminology on type II, class 1, machinists' ball peen hammer.

3.11.1.1 *Style A, hickory handles, polished face and peen.* Style A hammers shall have hickory handles conforming to 3.2.2.1 and the heads shall have the following finish unless otherwise specified (see 6.1). The finish shall conform to 3.4.2 except the necks and the front and back of the eye shall conform to 3.4.5 and the face, chamfer, and ball peen shall be finished to conform to 3.4.1 and 3.4.7. The necks, front and back of the eye, and the bell shall have an enameled finish to conform to 3.4.6. The bell and chamfer shall be round within 1/32 inch with no flattened area deeper than 0.015 inch. Style A hammers shall conform to table VI and shall be similar to figure 8.

Table VI - Type II, class 1, style A, machinist, ball peen, hickory handle, polished face and peen.

Weight (tolerances in ounces)	Length of head		Diameter of head at face +3/8 -1/16	Handle length, overall ±1	Eye		
					Number	Dimensions, minimum	
						B	C
Ounces	Inches		Inches	Inches		Inch	Inch
2 ± 1/4	2-1/8	±1/2	5/8	10	1, 2 or 3	No requirement	
4 ±1/2	2-3/4		3/4	10-1/2	1, 2 or 3	19/64	9/16
6 ±1/2	3		13/16	11	1, 2 or 3	19/64	39/64
8 ± 3/4	3-1/4		15/16	12	1, 2 or 3	21/64	3/4
12 ± 2	3-5/8		1- 1/8	13	1, 2 or 3	27/64	13/16
Pounds							
1 ±2	4-1/16	±3/4	1- 3/16	14-1/2	1, 2 or 3	7/16	13/16
1-1/4 ±2	4-3/8		1- 1/4	15	1, 2 or 3	33/64	13/16
1-1/2 ±2	4-3/4		1- 3/8	15	1, 2 or 3	33/64	15/16
2 ±2	5		1- 1/2	16	1, 2 or 3	17/32	15/16
2-1/2 ±4	5-3/8		1-11/16	16	1, 2 or 3	37/64	1- 1/16
3 ±4	5-3/4		1- 7/8	16	1, 2 or 3	11/16	1- 1/8

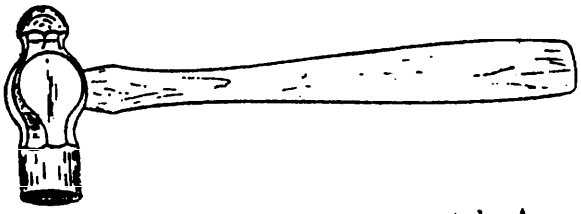

FIGURE 8.—Type II, class 1, style A, machinists', ball peen, hickory handle, polished face and peen.

3.11.1.2 *Style B, steel or fiberglass handle, polished face or peen.* Style B hammers have a steel handle conforming to 3.2.2.2 or a fiberglass handle conforming to 3.2.2.3. The heads shall conform to 3.11.1.1. Style B hammers shall conform to table VII and shall be similar to any option of figure 9.

3.11.2 *Class 2 riveting.* Class 2 hammer heads shall be square in cross section in the central or eye area, the section adjacent to the face shall be round or approximately octagonal. The opposite end shall have a cross peen. The face shall be flat with the edges slightly chamfered. The face and peen shall be hardened to not less than 50 nor more than 57 on the Rockwell "C" scale (see 4.4.1). Class 2 hammers shall have a hickory handle (see 3.2.2.1) unless a steel handle (see 3.2.2.2) or a fiberglass handle (see 3.2.2.3) is specified (see 6.1) and shall conform to table VIII and shall be similar to figure 10.

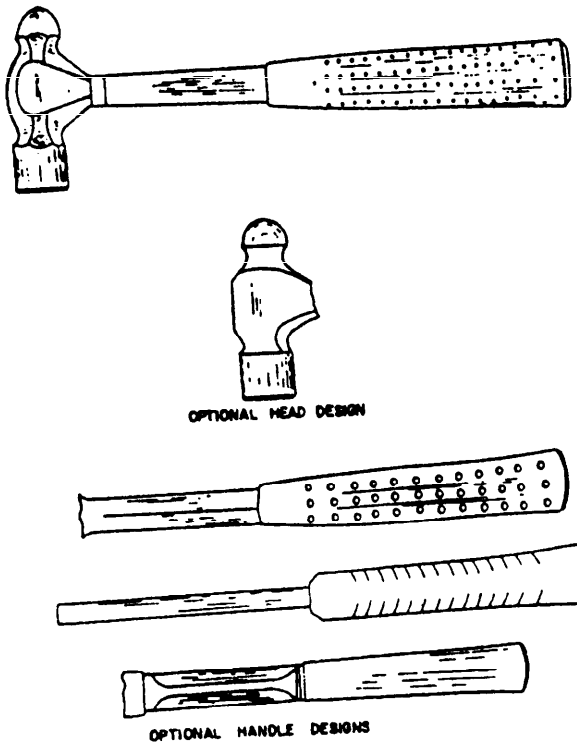

FIGURE 9.—Type II, class 1, style B, machinists', ball peen, steel or fiberglass handle, polished face and peen.

Table VII - Type II, class 1, style B, machinist's, ball peen, steel or fiberglass handle, polished face and peen.

Weight (tolerances in ounces)	Length of head	Diameter of head at face +3/8 -1/16	Handle length, overall +1 -2
Ounces	Inches	Inches	Inches
8 ± 1	3-3/16 } ±1/2	15/16	12
12 ± 2	3-5/8 }	1- 1/8	13
Pounds			
1	4-1/16	1- 3/16	14-1/2
1-1/4 } ±2	4-3/8	1- 1/4	15
1-1/2 }	4-3/4 } ±3/4	1- 3/8	15
2	5	1- 1/2	16
2-1/2 ±4	5-3/8	1-11/16	16

Table VIII - Type II, class 2, machinist's riveting.

Weight	Length of head ±3/4	Distance across flats at face +3/8 -1/8	Handle length, overall +2 -1	Eye[1]		
				Number	Dimensions, minimum	
					B	C
Ounces	Inches	Inch	Inches		Inch	Inch
4 } ±1/2	3-11/16	1/2	11	2 or 3	5/16	11/16
7 }	4	5/8	12	2 or 3	3/8	3/4
9 } ±1	4- 1/4	3/4	12	2 or 3	7/16	13/16
12 }	4- 3/8	7/8	13	2 or 3	7/16	13/16

[1] Eye dimensions do not apply for some tools with steel or fiberglass handles.

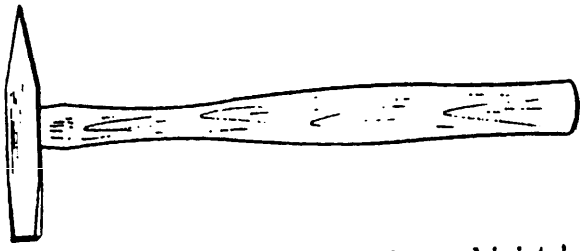

FIGURE 10.—Type II, class 2, machinists', riveting.

3.12 Type III, bricklayers'. Type III hammers shall have a flat square-edged face, the cross section adjacent to the face shall be approximately square. The opposite end of the head shall be chisel shaped and may be up to 1/4 inch wider than the striking face and shall be at right angles to the handle. The face shall have a medium-fine, bright-polish finish (see 3.4.1), the remainder of the head may have a natural finish (see 3.4.5) and shall have an enamel coating (see 3.4.6). The face and chisel shall be hardened to not less than 50 nor more than 57 on the Rockwell "C" scale (see 4.4.1).

3.12.1 *Style A, hickory handle.* Style A hammers shall have a hickory handle conforming to 3.2.2.1 and shall conform to table IX and shall be similar to figure 11.

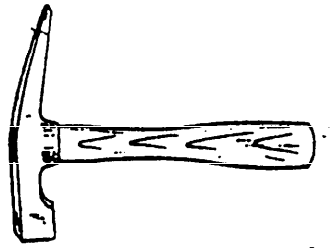

FIGURE 11.—Type III, style A, bricklayers', hickory handle.

3.12.2 *Style B, steel or fiberglass handle.* Style B hammers shall have a steel handle (see 3.2.2.2) or a fiberglass reinforced plastic handle (see 3.2.2.3). The hammer shall conform to table X and shall be similar to any option of figure 12.

Table IX - Type III, style A, bricklayers, hickory handle.

Weight	Length of head ±1	Distance across flats at face +1/4 -1/16	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Ounces	Inches	Inch	Inches		Inch	Inches
11 ± 1	6-1/2	3/4	11	1 or 3	7/16	7/8
16 ± 2	7-1/8	13/16	11	1 or 3	1/2	1
24 ± 2	8	7/8	12	1 or 3	35/64	1-7/64
32 ± 3	9-1/2	1	12	1 or 3	9/16	1-1/8

Table X - Type III, style B, bricklayers, steel or fiberglass handle.

Weight ±2	Length of head ±1	Distance across flats at face +1/4 -1/16	Handle length, overall ±1
Ounces	Inches	Inch	Inches
16	7-1/8	13/16	11
24	8	7/8	12

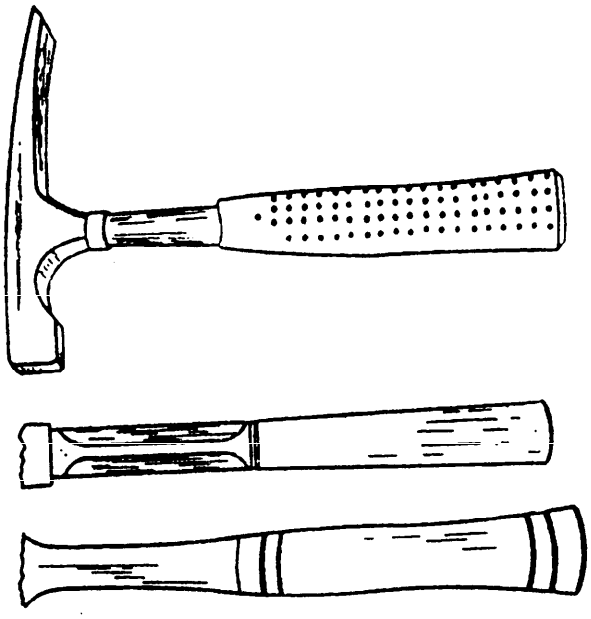

FIGURE 12.—Type III, style B, bricklayers', steel handle.

3.13 **Type IV, farriers', driving (shoeing).** Type IV hammers shall have hickory handles (see 3.2.2.1). They shall have a flat striking face on one end and a curved nail-pulling claw on the opposite end. The section of the head from the eye to the striking end may be either round or octagonal and shall taper slightly smaller toward the face. The face shall have a medium-fine, bright-polish finish (see 3.4.1) and the remainder of the head may have a natural finish (see 3.4.5) and shall have an enamel coating (see 3.4.6). The faces shall be hardened to not less than 50 nor more than 60, and the claw to not less than 40 nor more than 55 on the Rockwell "C" scale (see 4.4.1). They shall conform to table XI and shall be similar to figure 13.

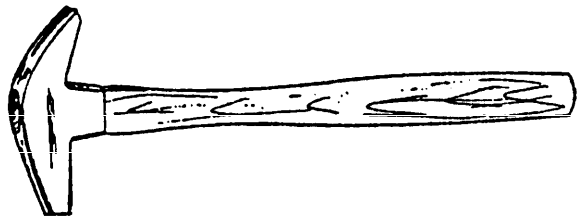

FIGURE 13.—Type IV, farriers', driving (shoeing).

Table XI - Type IV, farriers, driving (shoeing).

Weight ±2	Diameter of head at face +1/4 -1/8	Handle length, overall ±1	Eye		
			Number	Dimensions, minimum	
				B	C
Ounces	Inch	Inches		Inch	Inch
10	5/8	13	1, 2 or 3	7/16	7/8

Table XII - Type V, geologist (propsecting pick).

Weight ±2	Head length, overall ±3/4	Distance across flats at face ±3/16	Handle length, overall ±1	Eye[1]		
				Number	Dimensions, minimum	
					B	C
Ounces	Inches	Inch	Inches		Inch	Inches
16	7-1/4	3/4	13	1 or 3	7/16	1
24	7-3/4	7/8	13	1 or 3	9/16	1-1/16

[1] Eye dimensions do not apply for some hammers with steel or fiberglass handles.

3.14 Type V, geologists' (prospecting pick). Type V hammers shall have a hickory handle (see 3.2.2.1) unless a steel handle (see 3.2.2.2) or a fiberglass reinforced plastic handle (see 3.2.2.3) is specified (see 6.1). The cross-sectional shape shall be square with a flat face on one end and a pointed pick on the opposite end. The length of the pick from the near side of the eye to the point shall be not less than 4 inches. The face shall have a medium-fine, bright-polished finish (see 3.4.1) and the remainder of the head shall have either a natural finish (see 3.4.5) or an enamel coating (see 3.4.6). The face and pick end shall be hardened to not less than 50 nor more than 57 on the Rockwell "C" scale (see 4.4.1). Type V hammers shall conform to table XII, and shall be similar to figure 14.

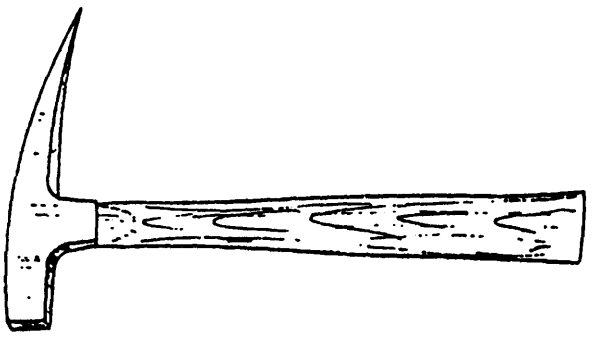

FIGURE 14.—Type V, geologists' (prospecting pick).

3.15 Type VI, scaling (boiler pick). Type VI hammers shall have a hickory handle (see 3.2.2.1) unless a fiberglass reinforced plastic handle (see 3.2.2.3) is specified (see 6.1). The central cross section of the head shall be square. One end shall have a cross tapered chipping edge. The opposite end shall have a straight tapered chipping edge. The chipping edges shall have a medium-ground finish (see 3.4.2) with a radius of approximately 1/32 inch. Edges shall be ground in such a manner as to eliminate all sharp edges. The remainder of the head shall have a natural finish (see 3.4.5) or an enamel coating (see 3.4.6). The chipping edges shall be hardened to not less than 50 nor more than 60 on the Rockwell "C" scale (see 4.4.1). Type VI hammers shall conform to table XIII and shall be similar to figure 15.

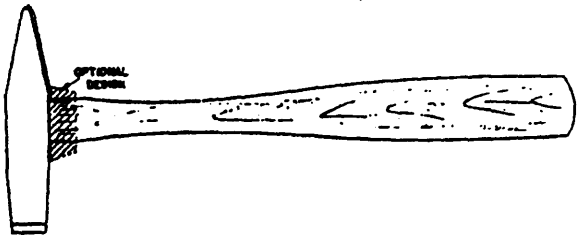

FIGURE 15.—Type VI, scaling (boiler pick).

3.16 Type VII, shoemakers'. Type VII hammers shall have a hickory handle (see 3.2.2.1) and a forged steel head. The width of the curved end shall be not less than the diameter of the striking face. The face shall be slightly convex and may be slightly chamfered or have an unchamfered edge. The face and curved end shall be hardened

Table XIII - Type VI, scaling (boiler pick).

Weight ±3 ounces	Length of head ±3/4	Width of chipping edges ±1/8	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Pound	Inches	Inches	Inches		Inch	Inch
1	5-1/2	1-1/8	14	1 or 2	9/16	7/8

to not less than 44 nor more than 60 on the Rockwell "C" scale (see 4.4.1). Type VII hammers shall conform to table XIV and shall be similar to figure 16.

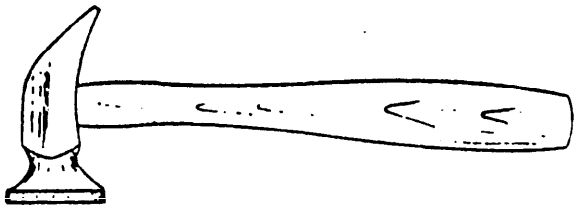

FIGURE 16.—Type VII, classes 1 and 2, shoemakers', rough and smooth face.

3.16.1 *Class 1, rough face.* Class 1 hammers shall be uniformly roughened to produce a knurled-surface appearance. The head shall have a natural finish (see 3.4.5) and an enamel coating (see 3.4.6).

3.16.2 *Class 2, smooth face.* Class 2 hammers shall have a medium-fine, bright-polished face (see 3.4.2). The remainder of the head shall have a natural finish (see 3.4.5) and an enamel coating (see 3.4.6).

3.17 **Type VIII, trimmers'.** Type VIII hammers shall have hickory handles conforming to 3.2.2.1.

3.17.1 *Class 1, tack, nonmagnetized.* Class 1 hammer heads shall be square in central cross section with one end tapered slightly toward the face. The corners shall also taper toward the face forming either a round or octagonal-shaped face. The opposite end shall have a cross peen. The free end of the handle shall be provided with either a ferruled inserted steel claw, secured by one or more pins or rivets passing transversely through the handle, or an attached steel claw fastened with screws to the side or end of the handle in such a manner that the claw body is flush with the handle surface. The face, peen and claw shall have a medium-fine, bright-polished finish (see 3.4.1). The face, peen, and attached claw shall be hardened to not less than 50 nor more than 60 on the Rockwell "C" scale (see 4.4.1). Class 1 hammers shall not be magnetized and shall conform to table XV and shall be similar to figure 17.

Table XIV - Type VII, classes 1 and 2, shoemakers, rough and smooth face.

Weight ±2	Diameter of face +1/4 -1/16	Handle length, overall ±1	Eye		
			Number	Dimensions, minimum	
				B	C
Ounces	Inches	Inches		Inch	Inch
14	1-3/8	10	2 or 3	1/2	3/4
18	1-5/8	10	2 or 3	5/8	3/4

Table XV - Type VIII, class 1, trimmers, tack, nonmagnetized.

Weight ±1/2	Length of head +1 -1/4	Distance across flats at faces +3/8 -1/16	Handle length, overall ±3/4 (exclusive of claw)	Eye		
				Number	Dimensions, minimum	
					B	C
Ounces	Inches	Inch	Inches		Inch	Inch
4	3-1/2	1/2	11	2 or 3	3/8	9/16
5	5	5/8	11	2 or 3	7/16	5/8

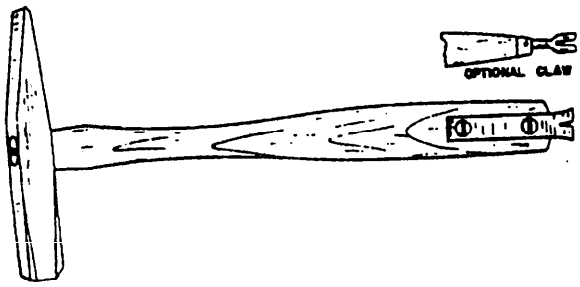

FIGURE 17.—Type VIII, class 1, trimmers', tack, nonmagnetized.

3.17.2 *Class 2, tack, magnetized.* Class 2 hammer heads shall be square, rectangular, or oval in central cross section and taper slightly smaller toward the faces forming round or oval faces. One end of the head shall be magentized and suitable for picking up and starting the driving of ferrous tacks. The opposite end shall be suitable for driving the tacks. Both faces shall be flat and the entire head shall have a medium-fine, bright-polish finish (see 3.4.1) and shall have a clear-lacquer coating (see 3.4.7). The faces shall be hardened to not less than 45 nor more than 60 on the Rockwell "C" scale (see 4.4.1). Class 2 hammers shall conform to table XVI and be similar to figure 18.

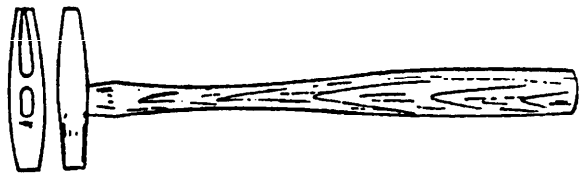

FIGURE 18.—Type VIII, class 2, trimmers', tack, magnetized.

3.17.3 *Class 3, upholstering.* Class 3 hammer heads shall be square in central cross section and may be round or square in cross section adjacent to faces. The faces shall be round in cross section. The head shall be curved to approximately a 7-inch radius. One end of head shall be magnetized and shall be suitable for picking up and

Table XVI - Type VIII, class 2, trimmers, tack, magnetized.

Weight ±1/2	Length of head +5/8 -1/4	Face diameter or major oval dimension +1/4 -1/16	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Ounces	Inches	Inch	Inches		Inch	Inch
4	3-1/4	1/2	11	1, 2 or 3	3/8	9/16
5	4-1/4	1/2	11	1, 2 or 3	5/16	19/32
8	4-3/8	5/8	11-1/2	1, 2 or 3	7/16	5/8

Table XVII - Type VIII, class 3, trimmers, upholstering.

Weight ±1	Length of head +1 -1/2	Diameter of head or distance across flats at face +3/8 -1/32	Handle length, overall ±1 (exclusive of claw)	Eye		
				Number	Dimensions, minimum	
					B	C
Ounces	Inches	Inch	Inches		Inch	Inch
7	5	1/2	11	1, 2 or 3	3/8	5/8
10	5-3/4	1/2	11	1, 2 or 3	3/8	5/8

starting the driving of ferrous upholstery tacks. The opposite end shall be suitable for driving the tacks. When a claw is specified (see 6.1), the hammer shall have a claw secured to the free end of the handle with screws in such a manner that the body of the claw is flush with the handle surface. When a claw is not specified, the hammer may be furnished with or without the claw at the manufacturer's option. Both faces shall be flat with edges slightly chamfered and the entire head shall have a medium-fine, bright-polished finish (see 3.4.1). The faces and attached claw shall be hardened to not less than 45 nor more than 60 on the Rockwell "C" scale (see 4.4.1). Class 3 hammers shall conform to table XVII and be similar to figure 19.

FIGURE 19.—Type VIII, class 3, trimmers, upholstering.

3.18 **Type IX, tinners'.** Type IX hammers shall have a hickory handle (see 3.2.2.1) unless a steel handle (see 3.2.2.2) or a fiberglass reinforced plastic handle (see 3.2.2.3) is specified (see 6.1). The faces and peens shall be hardened to not less than 50 nor more than 57 on the Rockwell "C" scale (see 4.4.1).

Table XVIII - Type IX, class 1, tinners, riveting.

Weight ±1-1/2	Length of head ±3/4	Distance across flats at face +3/8 -1/16	Handle length, overall ±1	Eye[1]		
				Number	Dimensions, minimum	
					B	C
Ounces	Inches	Inches	Inches		Inch	Inch
8	4-3/4	3/4	11-1/2	2 or 3	3/8	3/4
12	4-3/4	7/8	13	2 or 3	7/16	3/4
16	5	1	14	2 or 3	1/2	13/16
20	5	1-1/8	15	2 or 3	1/2	13/16

[1]Eye dimensions do not apply to some hammers with steel or fiberglass handles.

3.18.1 *Class 1, riveting.* Class 1 hammer heads shall be square in central cross section, and the section adjacent to the face shall be square with a bevel across the corners. One end shall have a flat face with the edges slightly chamfered and the opposite end shall have a cross peen. The face shall have a medium-fine, bright-polish finish (see 3.4.1) and the remainder of the head shall have a natural finish (see 3.4.5) and shall have an enameled coating (see 3.4.6). Class 1 hammers shall conform to table XVIII and shall be similar to figure 20.

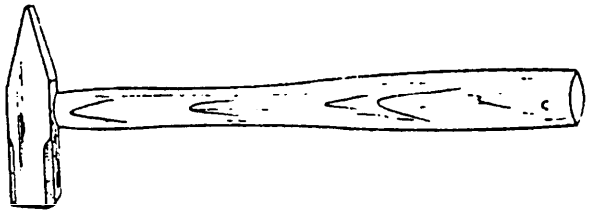

FIGURE 20.—Type IX, class 1, tinners', riveting.

3.18.2 *Class 2, setting (paneing).* Class 2 hammer heads shall be square in cross section from the eye section to the face. The opposite end above the eye section shall incline at approximately 40 degress to the longitudinal handle axis, the back side shall be beveled to form a chisel edge. The face shall be flat with sharp edges. The face shall have a medium-fine bright-polish finish (see 3.4.1) and the remainder of the head shall have a natural finish (see 3.4.5) and shall have an enameled coating (see 3.4.6). Class 3 hammers shall conform to table XIX and shall be similar to figure 21.

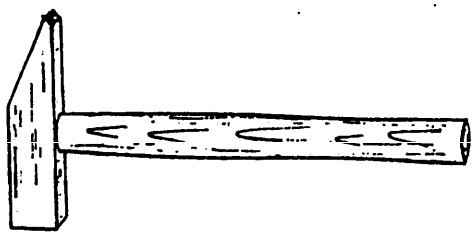

FIGURE 21.—Type IX, class 2, tinners', setting (paneing).

3.19 **Type X, blacksmiths' or engineers'.** Type X hammers shall have a hickory handle conforming to 3.2.2.1. The central cross section of the head shall be square. Heads under 4 pounds shall have medium-ground faces (see 3.4.2). Heads 4 pounds and over shall have medium-coarse-ground faces (see 3.4.3). The remainder of the head shall have a natural finish (see 3.4.5). The faces and peens shall be hardened to not less than 44 nor more than 55 on the Rockwell "C" scale (see 4.4.1).

3.19.1 *Class 1, double face.* Class 1 hammers shall have both faces octagonal in cross section. Class 1 hammers shall conform to table XX and shall be similar to figure 22.

Table XIX - Type IX, class 2, tinners, setting (paneing).

Weight ±1	Length of head ±3/4	Distance across flats at face +3/8 -1/16	Handle length, overall ±1	Eye[1]		
				Number	Dimensions, minimum	
					B	C
Ounces	Inches	Inches	Inches		Inch	Inch
12	4-3/4	7/8	12	2 or 3	3/8	3/4
16	5	1	13	2 or 3	1/2	13/16
20	5-1/4	1-1/16	14	2 or 3	1/2	13/16

[1]Eye dimensions do not apply to some hammers with steel or fiberglass handles.

Table XX - Type X, class 1, blacksmiths or engineers, double face.

Weight (tolerance in ounces)	Length of head	Distance across flats at face +3/8 -1/16	Handle length, overall +1 -2	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inches	Inches
2-1/2 ±4	4-1/2 ±3/4	1-1/2	15	2 or 3	5/8	7/8
3 ±4	4-3/4 ±3/4	1-5/8	15	2 or 3	3/4	1
4	5-1/4	1-3/4	15	2	3/4	1
4	5-1/4	1-3/4	32	2	3/4	1
6	6	2-1/8	32	2	1	1-1/4
8 ±8	6-1/2 ±1	2-1/4	32	2	1	1-1/4
10 ±8	7 ±1	2-1/2	32	2	1	1-3/8
12 ±8	7-1/2 ±1	2-1/2	34	2	1	1-3/8
16 ±8	8-1/4 ±1	2-7/8	34	2	1	1-3/8
20 ±8	8-3/4 ±1	3	36	2	1-1/4	1-1/2

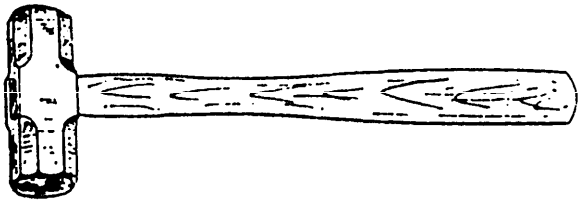

FIGURE 22.—Type X, class 1, blacksmiths' or engineers', double face.

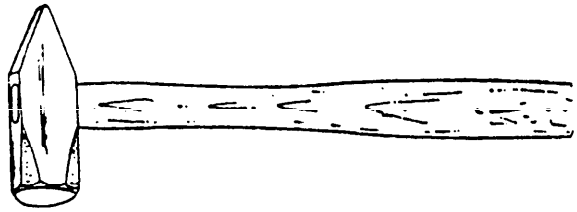

FIGURE 23.—Type X, class 2, blacksmiths', or engineers', cross peen.

3.19.2 *Class 2, cross peen.* Class 2 hammers shall have one face octagonal in cross section and the opposite end shall have a cross peen. Class 2 hammers shall conform to table XXI and shall be similar to figure 23.

Table XXI - Type X, class 2, blacksmiths or engineers, cross peen.

Weight (tolerance in ounces)	Length of head	Distance across flats at face +3/8 -1/16	Handle length, overall +1 -2	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inch	Inches
2 ±4	4-1/2 ±3/4	1-3/8	16	2 or 3	5/8	7/8
2-1/2 ±4	4-3/4 ±3/4	1-1/2	16	2 or 3	5/8	7/8
3 ±4	5 ±3/4	1-5/8	16	2 or 3	3/4	1
4	5-1/2 ±3/4	1-3/4	16	2 or 3	3/4	1
6 ±8	6-1/2 ±1	2	32	2	1	1-1/4
8 ±8	7 ±1	2-1/4	32	2	1	1-1/4
10 ±8	7-1/2 ±1	2-1/2	32	2	1	1-3/8
12 ±8	8 ±1	2-5/8	34	2	1	1-3/8
16 ±8	9 ±1	2-7/8	36	2	1	1-3/8

Table XXII - Type X, class 3, blacksmiths or engineers, straight peen.

Weight ±8 ounces	Length of head ±1	Distance across flats at faces +3/8 -1/16	Handle length, overall +1 -2	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inch	Inches
8	7	2-1/4	32	2	1	1-1/4
12	8	2-5/8	34	2	1	1-3/8
14	8-1/2	2-3/4	34	2	1	1-3/8

3.19.3 *Class 3, straight peen.* Class 3 hammers shall have one face octagonal in cross section and the opposite end shall have a straight peen. Class 3 hammers shall conform to table XXII and shall be similar to figure 24.

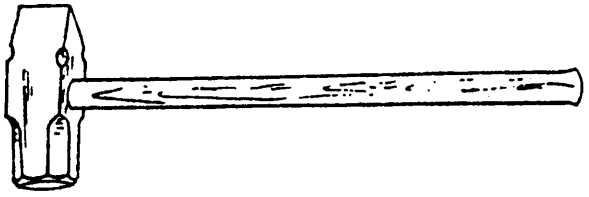

FIGURE 24.—Type X, class 3, blacksmiths' or engineers', straight peen.

3.20 **Type XI, stoneworkers'.**

3.20.1 *Class 1, hand drilling.* Class 1 hammers shall have a double faced head and a hickory handle conforming to 3.2.2.1. The central cross section of the head shall be square. The sides adjacent to the face shall have tapered corners from the eye to the faces forming an octagonal-shaped face. Faces shall be convex with a medium-ground finish (see 3.4.2). The remainder of the head shall have a natural finish (see 3.4.5). The faces shall be hardened to not less than 44 nor more than 55 on the Rockwell "C" scale (see 4.4.1). Class 1 hammers shall be similar to figure 25.

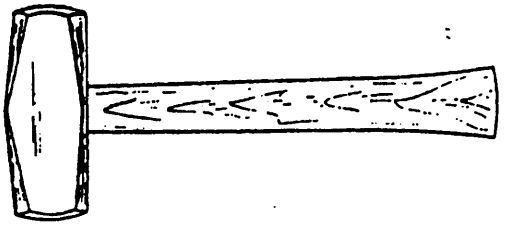

FIGURE 25.—Type XI, class 1, styles A and B, stoneworkers', hand drilling, long and short pattern.

3.20.1.1 *Style A, long pattern.* Style A hammers shall conform to table XXIII.

Table XXIII - Type XI, class 1, style A, stoneworkers, hand drilling, long pattern.

Weight ±4 ounces	Length of head ±1/2	Distance across flats at face +1/4 -1/16	Handle length, overall ±3/4	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inch	Inch
3	5-1/4	1-1/8	10-1/2	2 or 3	3/4	1
4	5-3/4	1-3/8	10-1/2	2 or 3	3/4	1

Table XXIV - Type XI, class 1, style B, stoneworkers, hand drilling, short pattern.

Weight (tolerance in ounces)	Length of head ±1/2	Distance across flats at face +1/4 -3/16	Handle length, overall ±3/4	Eye			
				Number	Dimensions, minimum		
					B	C	D
Pounds	Inches	Inches	Inches		Inch	Inch	
2 ± 3	3-3/4	1-1/4	10-1/2	2, 3 or 4	3/4	1	3/4
3 ± 4	4-1/4	1-3/8	10-1/2	2, 3 or 4	3/4	1	3/4
4 ±	4-1/2	1-9/16	10-1/2	2, 3 or 4	3/4	1	3/4

3.20.1.2 *Style B, short pattern.* Style B hammers shall conform to table XXIV.

3.20.2 *Class 2, striking (drilling).* Class 2 hammers shall conform to 3.20.1 except they shall be similar to figure 26.

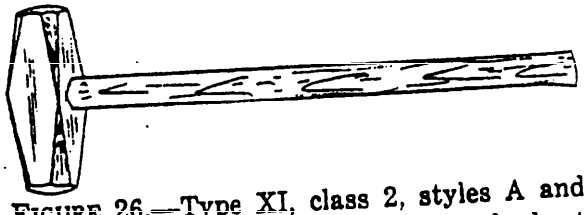

FIGURE 26.—Type XI, class 2, styles A and B, stoneworkers', striking, long and short pattern.

3.20.2.1 *Style A, long pattern (Nevada drill).* Style A hammers shall conform to table XXV.

3.20.2.2 *Style B, short pattern (Oregon drill).* Style B hammers shall conform to table XXVI.

3.20.3 *Class 3, napping.* Class 3 hammers shall have a double-faced head and hickory handle conforming to 3.2.2.1. The central cross section of the head shall be square and tapered smaller toward the faces. The corners shall taper to the faces forming an octagonal-shaped face. The faces shall be convex and have a medium-ground finish (see 3.4.2). The remainder of the head shall have a natural finish (see 3.4.5). The faces shall be hardened to not less than 45 nor more than 55 on the Rockwell "C" scale (see 4.4.1). Class 3 hammers shall conform to table XXVII and shall be similar to figure 27.

Table XXV - Type XI, class 2, style A, stoneworkers, striking, long pattern (Nevada drill).

Weight (tolerance in ounces)	Length of head +1 -1/4	Distance across flats at faces +3/8 -1/4	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inches	Inches
4 ± 4	5-3/4	1- 1/2	16	2	3/4	1
6	6-1/2	1- 3/4	32	2	1	1-1/4
8	7-1/4	1-15/16	32	2	1	1-1/4
10 ±8	7-3/4	2- 1/8	32	2	1	1-3/8
12	8	2- 1/4	34	2	1	1-3/8
16	8-1/2	2- 1/2	34	2	1	1-3/8

Table XXVI - Type XI, class 2, style B, stoneworkers, striking, short pattern (Oregon drill).

Weight (tolerance in ounces)	Length of head +3/8 -7/8	Distance across flats at faces +3/8 -1/8	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inches	Inches
4 ± 4	5	1-5/8	16	2	3/4	1
6	5-5/8	1-7/8	32	2	1	1-1/4
8 ±8	6-1/4	2-1/16	32	2	1	1-1/4
10	6-3/4	2-1/4	32	2	1	1-3/8
12	7-1/4	2-3/8	34	2	1	1-3/8

FIGURE 27.—Type XI, class 3, stoneworkers', napping.

3.20.4 *Class 4, masons'.* Class 4 hammers shall have hickory handles conforming to 3.2.2.1. The central cross section of the head shall be rectangular. One end of the head shall have a flat face with sharp corners. The opposite end shall have a straight peen with a beveled sharp edge. The face shall have a medium-ground finish (see 3.4.2). The remainder of the head shall have a natural finish (see 3.4.5). The face and peen shall be hardened to not less than 44 nor more than 55 on the Rockwell "C" scale (see 4.4.1). Class 4 hammers shall conform to table XXVIII and shall be similar to figure 28.

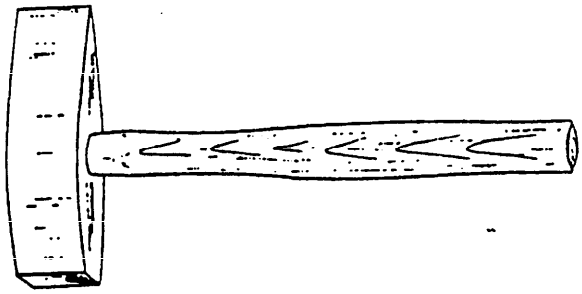

FIGURE 28.—Type XI, class 4, stoneworkers', masons'.

3.20.5 *Class 5, spalling.* Class 5 hammers shall have a hickory handle conforming to 3.2.2.1. The central cross section shall be rectangular. The faces shall be flat with sharp edges. Faces shall have a medium-coarse-ground finish (see 3.4.3), and the remainder of the head shall have natural fin-

Table XXVII - Type XI, class 3, stoneworkers, napping.

Weight (tolerance in ounces)	Length of head ±3/4	Distance across flats +3/8 -1/16	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inches	Inches
3 ±5	5-3/4	1-1/4	16	2	3/4	1
4	6-1/4	1-3/8	16	2	3/4	1
6 ± 8	6-3/4	1-5/8	16	2	1	1-1/4

Table XXVIII - Type XI, class 4, stoneworkers, masons.

Weight ±5 ounces	Length of head ±3/4	Dimensions of face +1/4 -1/16	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inch	Inches
3	5-1/2	2 by 1	16	3	5/8	1-1/8
4	6	2-3/8 by 1-1/8	16	3	5/8	1-1/8

ish (see 3.4.5). Faces shall be hardened to not less than 44 nor more than 55 on the Rockwell "C" scale (see 4.4.1).

3.20.5.1 *Style A, double face.* Style A hammer heads shall be double faced. The sides shall taper slightly smaller toward the faces. Style A hammers shall conform to table XXIX and shall be similar to figure 29.

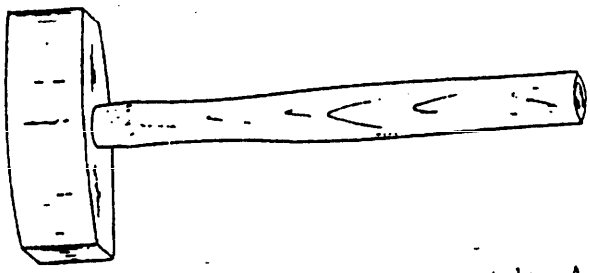

FIGURE 29.—Type XI, class 5, style A, stoneworkers', spalling, double face.

3.20.5.2 *Style B, single face.* Style B hammer heads shall have a face on one end and a straight peen, ground to form a chisel edge, on the opposite end. The sides shall taper slightly smaller toward the face and shall taper more rapidly toward the peen. The chisel edge shall have a medium-coarse-ground finish (see 3.4.3), and the peen shall be hardened to not less than 44 nor more than 55 on the Rockwell "C" scale (see 4.4.1). Style B hammers shall conform to table XXX and shall be similar to figure 30.

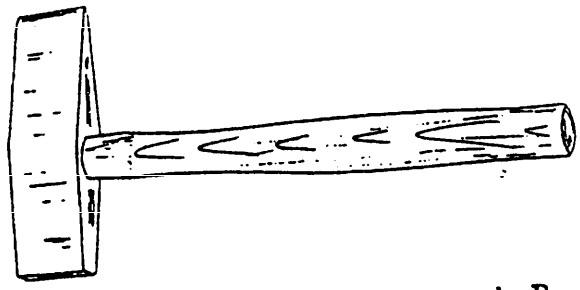

FIGURE 30.—Type XI, class 5, style B, stoneworkers', spalling, single face.

Table XXIX - Type XI, class 5, style A, stoneworkers, spalling, double face.

Weight ±8 ounces	Length of head ±3/4	Dimensions of each face +3/8 -1/8	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inch	Inches
8	6-1/2	2-1/2 by 1-1/2	32	2	1	1-1/4
12	7	2-5/8 by 2	34	2	1	1-3/8
16	8	3 by 2-1/8	34	2	1	1-3/8

Table XXX - Type XI, class 5, style B, stoneworkers, spalling, single face.

Weight (tolerance in ounces)	Length of head ±1	Dimensions of each face +3/8 -1/4	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inch	Inches
3 ± 5	5-3/4	1-3/4 by 1-1/8	16	2	3/4	1
4	6	1-7/8 by 1-1/4	16	2	3/4	1
6	6-1/2	2-1/4 by 1-3/8	32	2	1	1-1/4
8 ±8	7-3/4	2-3/8 by 1-1/2	32	2	1	1-1/4
12	8-3/4	2-5/8 by 1-3/4	34	2	1	1-3/8
16	9-1/2	2-7/8 by 2	34	2	1	1-3/8

3.20.6 *Class 6, stone sledge.* Class 6 hammers shall have a hickory handle conforming to 3.2.2.1. The central cross section shall be square. The corners shall taper smaller from the eye section toward a convex face causing the face to be octagonal in shape. The opposite end shall have a straight peen, bevel ground on both sides. The face and end of the peen shall have a medium-coarse-ground finish (see 3.4.3), and the remainder of the head shall have a natural finish (see 3.4.5). The face and peen shall be hardened to not less than 44 nor more than 55 on the Rockwell "C" scale (see 4.4.1). Class 6 hammers shall conform to table XXXI and shall be similar to figure 31.

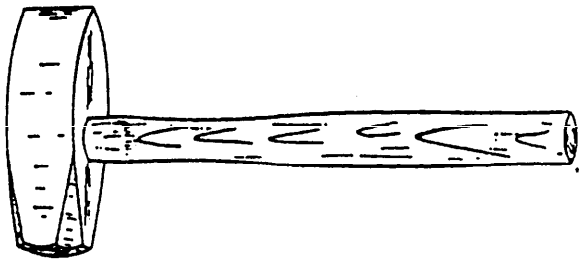

FIGURE 31.—Type XI, class 6, stoneworkers', stone sledge.

3.21 **Type XII, maul, ship (top).** Type XII hammers shall have a hickory handle conforming to 3.2.2.1. The central cross sectional shape shall be octagonal and shall taper toward the small end. The opposite

Table XXXI - Type XI, class 6, stoneworkers, stone sledge.

Weight ±8 ounces	Length of head ±1	Distance across flats at face and width of peen +3/8 -1/2	Handle length, overall ±1	Eye		
				Number	Dimensions, minimum	
					B	C
Pounds	Inches	Inches	Inches		Inch	Inches
6	6-3/4	1-3/4	32	2	1	1-1/4
8	7-1/4	2-1/4	32	2	1	1-1/4
12	8-1/4	2-5/8	34	2	1	1-3/8
16	9-1/4	2-7/8	34	2	1	1-3/8

Table XXXII - Type XII maul, ship (top).

Weight ±6 ounces	Length of head ±3/4	Diameter of small face ± 1/8	Diameter of large face ±1/16	Handle length, overall ±1	Eye		
					Number	Dimensions, minimum	
						B	C
Pounds	Inches	Inch	Inches	Inches		Inch	Inches
5	8-3/4	1/2	1-7/8	32	2	1	1-1/4

end shall have an octagonal neck and a circular poll. The small face shall be flat. The large face shall be slightly convex. Both faces shall have a medium-coarse-ground finish (see 3.4.3), and the remainder of the head shall have a natural finish (see 3.4.5). The faces shall be hardened to not less than 44 nor more than 55 on the Rockwell "C" scale (see 4.4.1). Type XII hammers shall conform to table XXXII and shall be similar to figure 32.

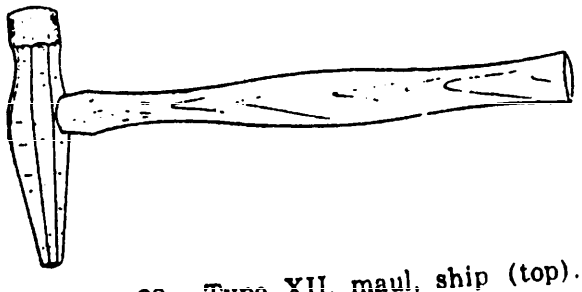

FIGURE 32.—Type XII, maul, ship (top).

3.22 **Type XIII, maul, spike, (railroad).** Type XIII hammers shall have a double-faced head and a hickory handle conforming to 3.2.2.1. The central section of the head shall be square and shall taper smaller from the eye towards both faces. The corner shall taper smaller toward both faces forming an octagonal-shaped face. Both faces shall be flat or slightly convex and have a medium-coarse-ground finish (see 3.4.3). The remainder of the head shall have a natural finish (see 3.4.5). The faces shall be chamfered and hardened to not less than 44 nor more than 55 on the Rockwell "C" scale (see 4.4.1). Type XIII hammers shall conform to table XXXIII and shall be similar to figure 33.

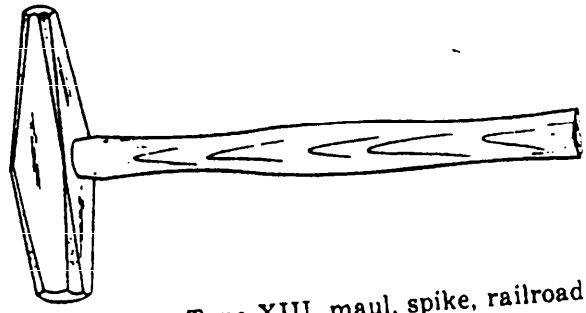

FIGURE 33.—Type XIII, maul, spike, railroad.

Table XXXIII - Type XIII, maul, spike, railroad.

Weight ±8 ounces	Length of head ±1	Distance across flats at large face ±1/4	Distance across flats at small face ±1/8	Handle length, overall +4 -1/2	Eye		
					Number	Dimensions, minimum	
						B	C
Pounds	Inches	Inches	Inch	Inches		Inch	Inches
6	11	1-3/8	3/4	32	2	1	1-1/4
8	12	1-1/2	7/8	32	2	1	1-3/8
10	13	1-3/4	1	32	2	1	1-3/8

Table XXXIV - Type XIV, maul, woodchopper's (Oregon pattern).

Weight ±8 ounces	Length of head ±1	Distance across flats at face ±3/8	Width of bits between ends +1/2 -1/8	Handle length, overall ±1	Eye		
					Number	Dimensions, minimum	
						B	C
Pounds	Inches	Inches	Inches	Inches		Inch	Inches
6	8-1/2	1-7/8	3-1/2	32	2 or 5	1	1-1/4
8	9-1/2	2-1/8	4	32	2 or 5	1	1-1/4

3.23 Type XIV, maul, woodchoppers' (Oregon pattern). Type XIV hammers shall have a hickory handle conforming to 3.2.2.1. The central cross section shall be square. The corners shall taper toward the face forming an octagonal-shaped face on one end. The opposite end shall be flattened to form a tapered bit. The cutting edge of the bit shall be curved, ground, and sharpened ready for service. The striking face and cutting edge of the bit shall have a medium-ground finish (see 3.4.2) and the remainder of the head shall have a natural finish (see 3.4.5). The bit shall be hardened to not less than 50 nor more than 60, and the face to not less than 44 nor more than 55 on the Rockwell "C" scale (see 4.4.1). Type XIV hammers shall conform to table XXXIV and shall be similar to figure 34.

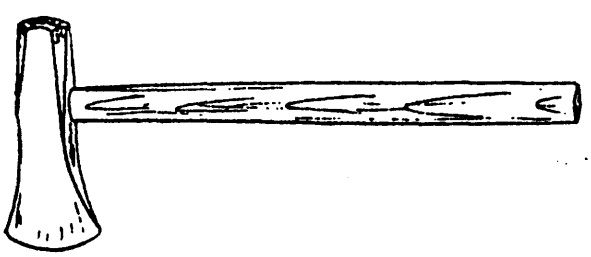

FIGURE 34.—Type XIV, maul, woodchoppers' (Oregon pattern).

3.24 Workmanship. Workmanship shall be first class in every respect. The tools shall have no burrs, fins, sharp projections, cracks, or any other imperfections which may impair their durability and serviceability.

4. SAMPLING, INSPECTION, AND TEST PROCEDURES

4.1 Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own or any other inspection facilities and services acceptable to the Government. Inspection records of the examination and tests shall be kept complete and available to the Government as specified in the contract or order. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 Sampling.

4.2.1 *Inspection lot.* All hammers of the same type, class, style, and size offered for delivery at one time shall be considered a lot for purposes of sampling and inspection.

4.2.2 *Sampling for examination.* A random sample of hammers shall be selected from each lot of material offered for inspection of visual and dimensional characteristics with lot acceptance based on table XXXV for single sampling inspection requirements in accordance with MIL-STD-105.

Table XXXV - Sampling for visual and dimensional examination AQL (approx.) = 1.5 percent defective.

Number of hammers, in an inspection lot	Sample, size, number of hammers, to be examined
40 and under	Inspection level III
41 to 300	Inspection level II
301 and over	Inspection level I

4.2.3 *Sampling for tests except* 4.4.6 *and* 4.4.3. A random sample of hammers shall be selected from each inspection lot in accordance with MIL-STD-105 at inspection level L-8. The acceptable quality level shall be 4.0 percent.

4.2.4 *Sampling for pull apart test* (4.4.6) *and striking test* (4.4.3). A random sample of hammers shall be selected from each inspection lot of hammers in accordance with MIL-STD-105 at inspection level L-4. If any sample hammer fails the test the lot shall be rejected.

4.3 **Examination.** Each of the sample hammers, selected in accordance with 4.2.2 shall be visually and dimensionally examined by the inspector to verify compliance with this specification. Visual examination includes weighing hammers (see 3.6 and applicable tables). Examination shall be conducted as specified in table XXXVI. Any hammer in the sample containing one or more defects shall not be offered for delivery.

Table XXXVI. - Classification of defects in accordance with MIL-STD-105.

Categories	Defects
Critical:	None defined.
Major:	
101	Type, class, style (when applicable) and weight (when applicable) not as specified.
102	Material for head nonconforming; not forged as required.
103	Head shape incorrect; central and striking end(s) cross section not as required, face(s) not flat, even and uniform, not free from deep scratches and excessive rough; edges and corners not properly chamfered.
104	Central cross section of head not in accordance with requirements, striking face(s) or edge not properly finished, not polished as required (type IX only).
105	Cross section at striking face not properly shaped, face not flat, even and uniform; opposite end not cross-peen (type IX, class 1 only).
106	Cross section at striking face not properly formed, not with a flat square face, not even and uniform; opposite end not inclined from eye at the specified angle, back edge not beveled to chisel edge (type IX, class 2 only).
107	Eye type not in accordance with requirements, dimensions less than the allowable minimum limits, inward taper not as specified (when applicable).
108	End opposite striking face not a properly curved nail pulling claw (type IV only).
109	End opposite striking face improperly shaped, not cross peen or claw as applicable (type VIII only).
110	End opposite striking face not cross peen, improperly shaped or located (type X only).
111	End opposite striking face not cross or straight peen or located as specified (type X, classes 1 and 2 and type XI, class 6 only).
112	End opposite striking face not chisel-shaped, pointed or straight-peen as applicable, not located and sharpened as specified, edge or point dulled, nicked, turned or chipped (except type XI, class 5, style A).
113	Striking face not even and uniform, not chamfered, not convex or flat as applicable (type II only).
114	Striking face and peen not finished as specified (type II only).
115	Striking face not uniformly roughened to produce a knurled surface appearance (type VII, class 1).
116	Width of chipping edges not within the specified tolerance.
117	Striking face not properly ground and polished, not free from scratches and excessive roughness (type VII, class 2 only).

Table XXXVI. - Classification of defects in accordance with MIL-STD-105 (cont'd.)

Categories	Defects
Major: (cont'd)	
118	Striking face(s) nonconforming; not ground flat, convex or spherical as applicable (types X and XII only).
119	Distance across flats at face not within specified limits (types I, IX and XI only).
120	Distance across flats at face or dimensions of face(s) (as applicable) not within requirements (types III, V and XI, class 5 only).
121	Distance across flats and face or dimension of head at face (as applicable) not within the specified tolerances (types X and XI).
122	Distance across flats at large and small faces or at striking face (as applicable not within specified limits (except type XII).
123	Distance across flats at face and width of bit between ends not within specified limits (type XIV only).
124	Bit not properly ground and sharpened ready for use, edge dulled, turned, nicked or chipped (type XIV only).
125	Steel claw not secured and positioned to free end of handle as specified, claw pins, rivets or screws not finished smooth (when applicable) (type VIII, class 3 only).
126	Handle not of the required grade and wood specie; not smoothly finished or properly shaped, not free from splits, cracks or worm holes (when applicable).
127	Handle not forged integral with head, improperly shaped, gripping end not properly built up and permanently secured and interlocked with handle with authorized covering material of proper length and thickness (when applicable) (types I, II, V and IX only).
128	Handle not secured and properly fitted to head; not free from openings between eye; wedge(s) or screw(s) missing, not flush, not of the correct material and type, not located as required (except types II, III, V, IX and XIII).
129	Wood handle not secured and properly fitted to head; not free from openings between eye; wedge(s) or screw(s) missing, not flush, not of the correct material and type, not located as required (when applicable) (types I, II, III, V, IX and XI only).
130	Length of head not within allowable limits (except type IV).
131	Length of pick from top of eye to point less than the specified minimum (type V only).
132	Diameter of head at face(s) not within the specified tolerance (type IV only).
133	Diameter of head at small end and at mushroom end not within specified tolerances (type IX only).
134	Diameter of large or small faces not within the required tolerances (type XII only).
135	Face(s) peen (when applicable) and claw not finished as required (type VIII only).
136	Head not smooth, not free from burrs, nicks, dents, sharp or chipped edges.
Minor:	
201	Diameter of head at face not within the specified tolerances.
202	Length of head and overall length of handle not within allowable limits.
203	Distance across flats or diameter of head not within tolerance (when applicable).
204	Body of head not natural or enamel finish as required (when applicable).
205	Color of enamel finish of body nonconforming (when applicable).
206	Face diameter or major oval diameter not within specified limits (when applicable).
207	Entire head not polished (type VIII only).
208	Finish of head not natural or enamel as specified.
209	Finish of head not ground, natural or enamel as specified.
210	Face(s) and end of peen not polished (as applicable).
211	Overall length of handle not within requirements.
212	Marking, manufacturer's name or trademark missing, incorrect, illegible, not permanent or located as required.

4.4 Test procedures.

4.4.1 *Hardness* (*see* 3.7). Suitable grinding or dressing shall be performed over the

area or areas to be tested so that any case-hardened surface is removed. The Rockwell hardness tests shall be conducted in accordance with method 2[illegible] of Fed Test Method Std. No. 151.

4.4.1.1 Three or more determinations shall be made of the hardness on the specified portion or portions of the tool. All values determined shall fall within the hardness range specified herein. Hardness determinations of faces shall be made on the faces. For picks, bits, and chisel ends (beveled edges) the measurements shall be made close to the point or edge but not closer than 1/8 inch; for curved claws and ripping claws of type I carpenter's hammers, the measurement shall be made adjacent to the nail pulling wedge or opening at distances greater than 3/8 inch from the ends of the claws. Hammers which have been rim tempered to reduce chipping hazards shall be hardness tested on the face in the untempered area(s).

4.4.2 *Striking tests for faces and peens of steel hammers having overall handle lengths 25 inches and under.* Faces and peens shall not chip, crack, or spall when subjected to the tests specified in 4.4.2.1 and 4.4.2.2.

4.4.2.1 Each face and the peen (where applicable) of the sample hammers under test shall be manually struck at least 12 blows by the ball-peen of a 4-ounce machinist's ball-peen hammer. The Rockwell hardness of the ball-peen of the machinist's hammer used in testing shall not be less than 50 nor more than 60 on the "C" scale. The hammer under test may be manually supported at the handle or the head may be supported on any convenient rest, at the discretion of the inspector.

4.4.2.2 Each face and the peen (where applicable) of the hammer under test shall strike 12 or more full blows on the old of a rigidly supported steel bar. The average Rockwell "B" hardness of the test face of the bar shall be not less than 92 nor more than 105. The cross sectional area of the test end of the bar shall not exceed the maximum cross sectional area of the tested hammer head by more than 10 percent. The face of the test end of the bar for each test shall be smooth and may be either flat or slightly convex.

4.4.3 *Striking test for hammers having overall handle lengths greater than 25 inches.*

4.4.3.1 *Striking test.* The sample tool shall withstand 100 full swinging blows by continuous hand striking, or the mechanical equivalent, on a hardened steel die block showing a hardness reading of Rockwell "40" to "45" C. The sample tool shall have failed this test if the head mushrooms to the extent that cracking develops in the striking faces or edge of the mushroom, or if there are any other signs of failure such as spalling, cracking of the head, or spreading of the eye. The test block shall be 10 inches square or larger; the thickness shall be at least 8 inches. For hand swinging, the die block shall be so supported or mounted that the test face is at knee height (approximately .19 inches above the floor). On double-faced tools, only one selected face shall be tested for compliance with this requirement.

4.4.4 *Toughness test for beveled ends, chisel ends, and picks.* No portion of the head shall flake, bend, crack, fracture, spall, or chip, nor shall the edges or points of the end under test wear or flatten unduly when the head is subjected to the following test: The head shall be held securely in an upright position by a vise or clamp with the longitudinal axis of the portion of the head under test in approximately a vertical plane and with the opposite end of the head resting on a solid foundation. A steel bar, having a Rockwell "B" hardness of not less than 92 nor more than 105, shall be held at right angles with the end under test and

struck a sufficient number of blows with a heavy hammer to make a cut in the bar at least 3/16 inch deep. The steel bar shall be at least 3/4 inch in diameter, except that when the type V hammer is tested the bar shall be flat and at least 1/2 inch wide. On tools with beveled or chiseled ends, at least four points on the edge shall be tested.

4.4.5 *Nail-pulling tests for claw hammers.* Inside edges of nail-pulling claws shall not chip, flake, or notch, nor shall the claw deform or the handle break or shift in the body eye when the hammer is subjected to each of the tests specified in 4.4.5.1 and 4.4.5.2.

4.4.5.1 Two bright wire finishing nails of each of the sizes shown for the respective hammer weight indicated in table XXXVII shall be driven through sound planks or boards of a suitable soft wood (such as yellow pine) of the thickness shown. The nails should be so spaced as not to interfere with the pulling operation. The head shall be driven flush with the plank on one side. The protruding ends of the nails on the other side of the plank shall in turn be gripped with the claw and the handle quickly and forcibly moved to pull the nail through the board. As each pulling test is begun, the face of the claw shall be in contact with the surface of the board where the nail protrudes, and during the pulling stroke, contact of the hammer head with the board shall be maintained by moving the hammer handle through an arc until the striking face end of the hammer head touches the board.

4.4.5.2 Two bright wire flat head common nails of each of the sizes shown for the respective hammer weights in table XXXVIII shall be driven into either hardwood or sound pine joists, beams, or layers of planks of such thickness that the pointed end of the nail does not protrude. The headed end of the nail shall protrude an amount sufficient to grip the nail body under the head with the claw, so that the claw face is in contact with the wood where the head protrudes. Each nail shall be withdrawn up to the limit of possible movement of the handle, by applying the force necessary. During the pulling stroke, contact of the hammer head with the wood shall be maintained by moving the handle through an arc until the end of the handle touches the wood or is in the plane of the surface of the wood.

Table XXXVIII - Weight and size of nails.

Hammer weight	Size of common nails
Ounces	Inches
5 and 7	8 d (0.131 x 2-1/2)
10 and 13	10 d (0.148 x 3)
	16 d (0.162 x 3-1/2)
16 and 20	16 d (0.162 x 3-1/2)
	20 d (0.192 x 4)
26 and 28	20 d (0.192 x 4)

Table XXXVII - Weight, size of nails, and thickness of board.

Hammer weight	Size of finishing nails	Nominal thickness of board
Ounces	Inches	Inches
5 and 7	2 d (0.0583 x 1)	1/2
	6 d (0.0915 x 2)	1/2
10 and 13	2 d (0.0583 x 1)	1/2
	6 d (0.0915 x 2)	1
16, 20, 26 and 28	2 d (0.0583 x 1)	1/2
	6 d (0.0915 x 2)	1
	10 d (0.113 x 2)	1-1/2

4.4.6 *Pull-apart test.* Hammers with tubular-steel handles, fiberglass reinforced plastic handle, and wood handles assembled with chemical adhesive bond shall be subjected to this test. Each of the sample hammers having tubular steel handles selected in accordance with 4.2.4 shall have the grip removed and a steel plug inserted in the end of the tube to support the tube when gripped. The head and end of the handle shall be securely held in a standard tensile-testing machine or some other method may be employed. Hammers with heads weighing over 12 ounces, nominal weight, shall not pull apart or loosen when subjected to a pulling pressure of 2,250 pounds. Hammers with heads weighing 12 ounces or under, nominal weight, shall not pull apart when subjected to a pulling pressure of 750 pounds.

4.5 Inspection of preparation for delivery. The preservation, packaging, packing, and marking of the hammers shall be examined to determine compliance with the requirements of section 5 of this specification.

4.5.1 Examination of the preservation and packaging requirements not covered by referenced specifications shall be performed in accordance with the examination requirements of MIL-P-116.

4.5.2 Examination of packing and marking requirements not covered by referenced specifications shall be in accordance with MIL-STD-105 using an AQL of 4.0 percent defective.

5. PREPARATION FOR DELIVERY

(Civil agencies should refer to Fed Std. No. 102 for definitions and applications of the various levels of packaging protection for supplies and equipment.)

5.1 Cleaning, preservation, and packaging.

5.1.1 *Level A.* Hammers shall be preserved and packaged in accordance with level A of MIL-H-15424. Preservative compounds shall not be required for hammers when surfaces are protected with a vitreous or plastic coating, prime coated, painted or surfaces that are inherently resistant to corrosion. Unit packaging of these type hammers for level A shall be in accordance with method III.

5.1.2 *Level C.* Cleaning, preservation, and packaging shall be in accordance with the contractor's commercial practice.

5.2 Packing.

5.2.1 *Level A.* Hammers, packaged in accordance with level A or C as specified (see 6.1), shall be packed in accordance with level A requirements of MIL-H-15424.

5.2.2 *Level B.* Hammers, packaged in accordance with level A or C as specified (see 6.1), shall be packed in accordance with level B requirements of MIL-H-15424.

5.2.3 *Level C.* Hammers, packaged as specified, shall be packed in a manner to insure carrier acceptance and safe delivery at destination. Containers shall be in accordance with rules or regulations of carriers as applicable to the mode of transportation.

5.3 Marking.

5.3.1 *Military marking.* In addition to any special marking required by the contract or order, or herein, interior and exterior shipping containers shall be marked in accordance with MIL-H-15424.

5.3.2 *Civil agency marking.* In addition to any special marking required by the contract or order, interior and exterior shipping containers shall be marked in accordance with Fed. Std. No. 123.

6. NOTES

6.1 **Ordering data.** Purchasers should exercise any desired options offered herein and procurement documents should specify the following:

(*a*) Title, number, and date of this specification.
(*b*) Type, class and style, as applicable (see 1.2).
(*c*) Size (see applicable tables).
(*d*) Finish other than that specified.
(*e*) Length of handle for 4 pound hammer (type X, class 1) (see table XX).
(*f*) Whether steel or fiberglass handles for type II, class 2, type V, type VI and type IX, classes 1 and 2 hammers are required (see 3.11.2, 3.14, 3.15 and 3.18).
(*g*) Whether claw is required on type VIII, class 3 hammer (see 3.17.3).
(*h*) Applicable level of preservation, packaging and packing (see 5.1 and 5.2).
(*i*) Marking, if different (see 5.3).

6.2 Types, classes and styles of hammers covered in this specification corresponding to those covered in Federal Specification GGG-H-86a and GGG-H0086b (NAVY-Ships) are as follows:

This specification and GGG-H-0086b (NAVY-Ships)	*GGG-H-86a*
Type I, carpenters'	Type D
Class 1, nail, curved claw	Type D, class I
Style A, hickory handle, medium-fine, bright-polish finish	Type D, class I
Style B, steel or fiberglass handle, medium-fine, bright-polish finish.	Type D, class I
Class 2, ripping straight claw	
Style A, hickory handle, medium-fine, bright-polish finish	Type D, class III
Style B, steel or fiberglass handle, medium-fine, bright-polish finish.	Type D, class III
Type II, machinists'	Type L
Class 1, ball peen	Type L, class I
Style A, hickory handle, polished face and peen	Type L, class I
Style B, steel or fiberglass handle, polished face and peen	Type L, class I
Class 2, riveting	Type L, class IV
Type III, bricklayers'	Type C
Style A, hickory handle	Type C
Style B, steel or fiberglass handle	Not covered
Type IV, farriers', driving (shoeing)	Type H
Type V, geologist (prospecting pick)	Type I
Type VI, scaling (boiler pick)	Type P
Type VII, shoemakers'	Type R
Class 1, rough face	Type R, class I
Class 2, smooth face	Type R, class II
Type VIII, trimmers'	Type U
Class 1, tack, nonmagnetized	Type U, class I
Class 2, tack, magnetized	Type U, class II
Class 3, upholstering	Type W

Type IX, tinners'	Type V
Class 1, riveting	Type V, class II
Class 2, setting, (paneing)	Type V, class III
Type X, blacksmiths' or engineers'	Type A, type G, type SA
Class 1, double face	Type G and type SA, class II
Class 2, cross peen	Type A and type SA, class I
Class 3, straight peen	Type SA, class III
Type XI, stoneworkers'	Types J, M, N, S, T, and SB
Class 1, hand drilling	Type J
Style A, long pattern	Type J, class I
Style B, short pattern	Type J, class II
Class 2, striking	Type T
Style A, long pattern	Type T, class I
Style B, short pattern	Type T, class II
Class 3, napping	Type N
Class 4, masons'	Type M
Class 5, spalling	Type S
Style A, double face	Type S, class I
Style B, single face	Type S, class II
Class 6, stone sledge	Type SB
Type XII, maul, ship (top)	Type MB
Type XIII, maul, spike (railroad)	Type MA
Type XIV, maul, woodchoppers' (Oregon pattern)	Type MC

6.3 **Deletions.** The following types and classes of hammers in Federal Specification GGG-H-86a have been deleted from this specification and placed in Federal Specification GGG-H-33:

Type E, copper.
Type K, inserted face.
Class I, copper.
Class II, hide.
Class III, lead.
Class IV, plastic.
Class V, rubber.
Class VI, no bounce.
Type O, rubber.
Type X, lead.

The following types of hammers in Federal Specification GGG-H-86a have been deleted from this specification and placed in Federal Specification GGG-H-20.
Type F, ding.
Type Z, bumping, cross peen.

The following types and classes of hammers in Federal Specification GGG-H-86a have been deleted from this specification because they are obsolete and are not available commercially:

Type B, boilermakers, double face.
Type H, classes I, II and III, farriers, fitting, rounding (turning) and sharpening.
Type L, classes II and III, machinists, cross-peen and straight peen.
Type Q, shipfitters, riveting.
Type V, class I, tinners, raising.
Type Y, stunning.

The following types and classes of hammers in Federal Specification GGG-H-86a have been deleted from this specification due to the demand not being large enough to warrant specification coverage:

Type D, classes II and IV, carpenters, nail, curved claw, plain face and ripping, straight claw, plain face.

6.4 Transportation description. Transportation descriptions and minimum weights applicable to this commodity are:

Rail—Hammers:

Hammers, hand, not otherwise indexed by name.
Carload minimum weight 30,000 pounds.

Motor:

Hammers, hand, not otherwise indexed.
Truckload minimum weight 30,000 pounds, subject to Rule 115, National Motor Freight Classification.

Rail—Mauls & Sledges:

Mauls or sledges, handled.
Carload minimum weight 30,000 pounds.

Motor:

Mauls or sledges, handled.
Motor volume minimum weight 30,000 pounds, subject to Rule 115, National Motor Freight Classification.

MILITARY CUSTODIANS:
Army—Q
Navy—Sh
Air Force—MOA