HAMMERS, HATCHETS, AND AXES

DESCRIPTION AND USE

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1. GENERAL

1.01 This section covers the description and use of the standard types of hammers and hatchets recommended for Bell System use.

1.02 This section is reissued to include information on the use, care, and maintenance of the standard Bell System four-pound axe formerly contained in Section 081-745-100, which is cancelled. Since this is a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The hammers, hatchets, and axes that are described in this section should be ***used only for the purposes specified.***

1.04 In the interest of safety, observe the precautions in Part 3 when using these tools, especially those with sharp cutting edges.

2. DESCRIPTION AND USE

2.01 ***One Pound Claw Hammer*** (Fig. 1) is intended for general use in connection with driving nails. This hammer shall not be used for striking masonry drills or chisels as the head is apt to chip.

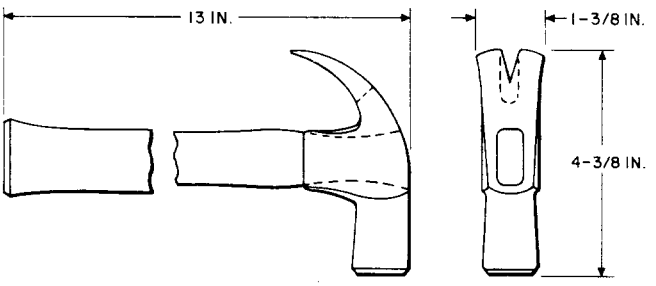


Fig. 1—One Pound Claw Hammer

2.02 ***One and One-Half Pound Claw Hammer*** (Fig. 2) has a full curved claw with a heat treated head similar to that of a ball peen hammer. It is suitable for light drilling operations. It is intended for use by the cable splicing forces in connection with drilling holes, removing cable sheath, and beating in the end of sleeves.

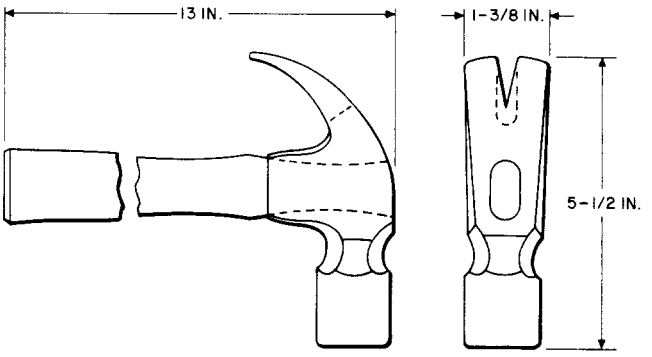


Fig. 2—One and One-Half Pound Claw Hammer

2.03 ***Two Pound Claw Hammer*** (Fig. 3) is a ripping claw hammer intended for use by the construction forces for general light construction work and for dismantling plant. This hammer shall not be used for striking masonry drills or chisels as the head is apt to chip.

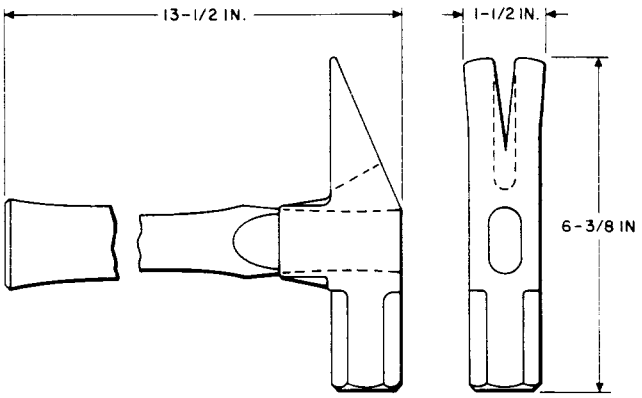


Fig. 3—Two Pound Claw Hammer

2.04 ***One Pound Ball Peen Hammer*** (Fig. 4) is intended for use in shops and garages and in passenger car tool kits.

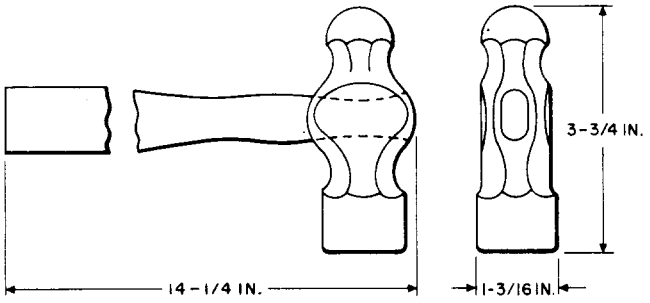


Fig. 4—One Pound Ball Peen Hammer

2.05 ***One and One-Quarter Pound Drilling Hammer*** (Fig. 5) is intended for use by the construction and installation forces for use with masonry drills and drill holders. The head of this hammer has a drilling face on one end and a tack hammer face on the opposite end to facilitate driving anchors and setting nails of the hammer drive anchors, particularly where the clearance is limited.

2.06 ***Two Pound Drilling Hammer*** (Fig. 6) is a double-faced hammer intended for use with medium weight masonry drills and chisels. This hammer is too heavy for use with the standard small masonry drills and should not be used for drilling holes in brick walls for masonry anchors. This use could result in cracked or loosened bricks.

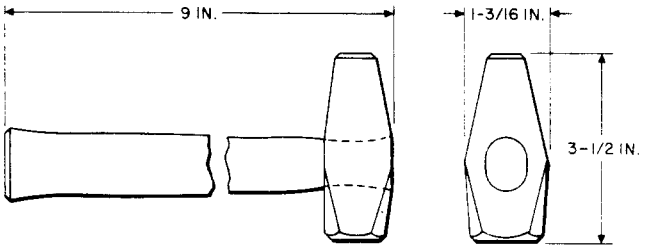


Fig. 5—One and One-Quarter Pound Drilling Hammer

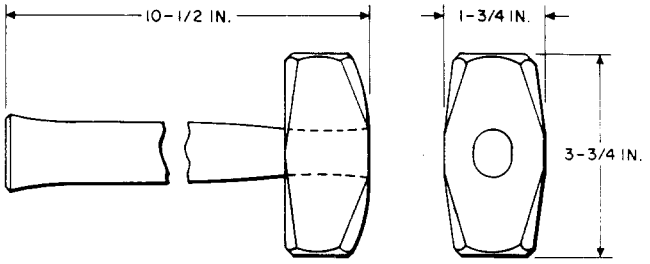
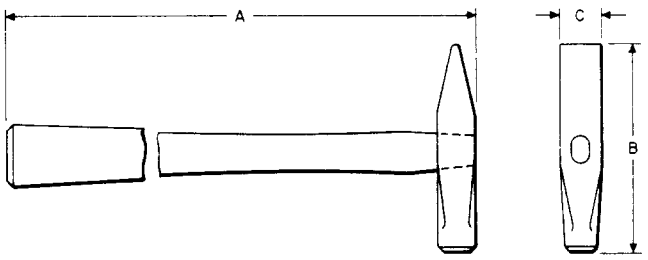


Fig. 6—Two Pound Drilling Hammer

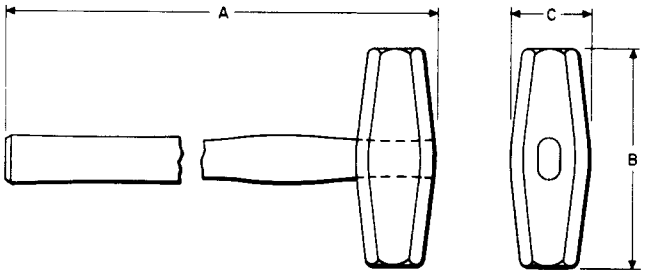
2.07 ***Riveting Hammers*** (Fig. 7) are available in four-ounce, seven-ounce, and twelve-ounce weights. The four-ounce hammer is for the central office forces. The seven-ounce hammer is intended primarily for use by the installation and repair forces but may also be used by the cable splicing forces for light operations. The twelve-ounce hammer which has a tempered head is suitable for use with the large chipping knife.



SIZE	A	B	C
4 OZ	11 IN.	3-5/8 IN.	5/8 IN.
7 OZ	12 IN.	4 IN.	3/4 IN.
12 OZ	13 IN.	4-1/2 IN.	7/8 IN.

Fig. 7—Riveting Hammer

2.08 ***Striking Hammers*** (Fig. 8) are available in four-pound and eight-pound weights. The four-pound hammer, equipped with a 15-3/4 inch handle, is intended for use by the construction forces in connection with drilling holes through walls and in floors and cutting pavement with chisels. This hammer is suitable for use with one hand. The eight-pound hammer is similar but has a 33-inch handle. It is intended for use by construction forces in cutting asphalt or stone with chisels and drilling holes with the heavy rock drills for dynamite or rock anchors. This hammer must be gripped with both hands when in use.



SIZE	A	B	C
4 POUND	15-3/4 IN.	6 IN.	1-1/2 IN.
8 POUND	33 IN.	7-3/8 IN.	1-7/8 IN.

Fig. 8—Striking Hammer

2.09 ***Blacksmith's Sledge Hammer*** (Fig. 9) is a ten-pound hammer intended for use by the construction forces for heavy striking.

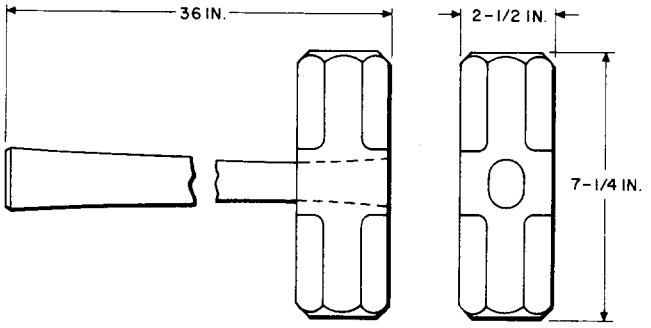


Fig. 9—Ten Pound Blacksmith Sledge

2.10 ***Stone Sledge Hammer*** (Fig. 10) is a sixteen-pound hammer intended for use by construction forces where very heavy striking is required. It may be used for breaking concrete.

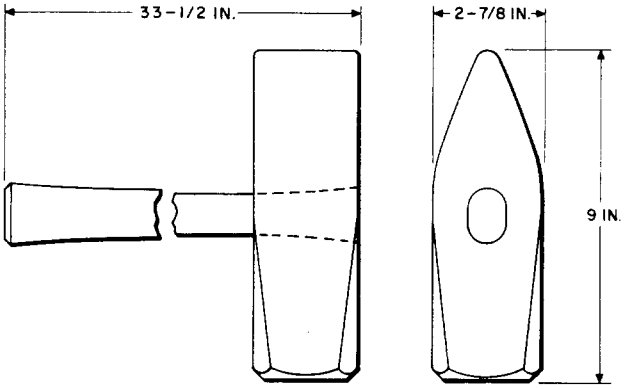


Fig. 10—Sixteen Pound Stone Sledge

2.11 ***Driving Hammer*** (Fig. 11) is a three-pound hammer having a striking face on one end and a straight peen on the opposite end of the head. The head is provided with a hole to facilitate straightening pole steps. It is intended for use by construction and installation forces in driving the heavier nails, lag screws, etc.

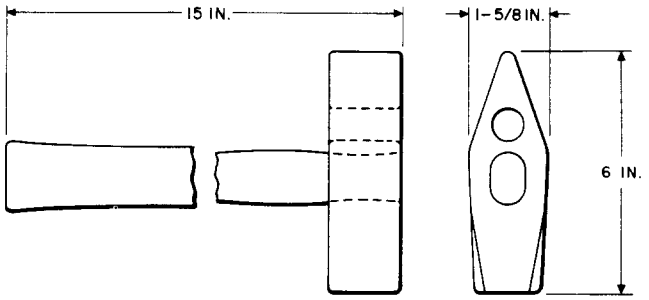


Fig. 11—Three Pound Driving Hammer

2.12 ***B Hatchet*** (Fig. 12) is a modified three-pound broad hatchet with a hickory handle for use as an alternative to the driving hammer in line construction work. It is not intended for use as a cutting tool and the blade has a blunt edge for safety. A square hole, in the outer corner of the blade is for use in holding the heads of 5/8-inch square head bolts and for straightening pole steps.

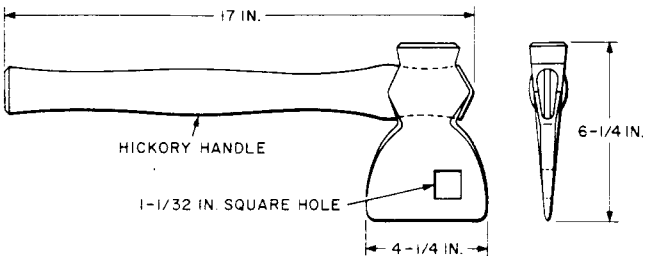


Fig. 12—B Hatchet

2.13 ***One and One-Quarter Pound Hatchet*** (Fig. 13) is a cutting tool of axe pattern. It is intended for use in pole inspection work and in general use where light chopping of wood is involved.

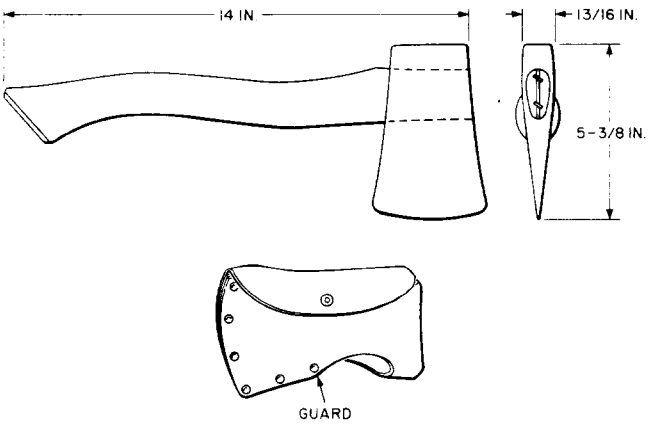


Fig. 13—One and One-Quarter Pound Hatchet and Guard

2.14 ***The Four-Pound Axe*** consists of a four-pound head with a suitably sharpened blade mounted on a hickory handle and provided with a guard. The head is secured to the handle by means of an epoxy bond. The four-pound axe is intended for use in cutting off poles and railroad car stakes, splitting logs, limbs, tree trunks, felling trees, and other work where heavy cutting is required. It is not designed for use as either a maul, a drilling hammer, a sledge, or a wedge for splitting logs. Never use an axe for these purposes as pounding on the head tends to open the eye as well as to mushroom the edges around the striking surface. An open eye results in a loose handle while mushrooming brings about splitting of the metal, both of which are hazardous conditions. Fig. 14 shows the four-pound axe and guard.

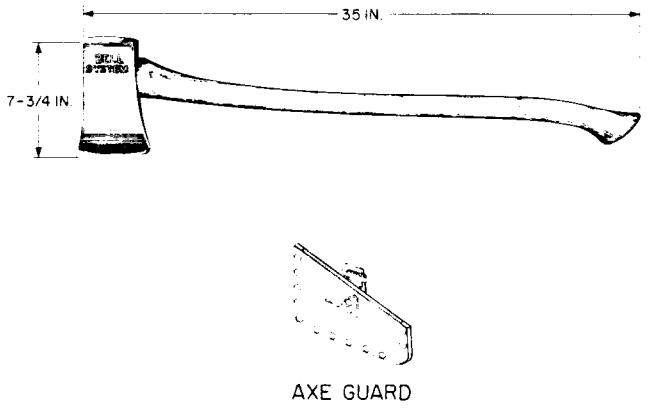


Fig. 14—Four Pound Axe and Guard

3. SAFETY PRECAUTIONS

3.01 The following safety precautions should be observed when using hammers, hatchets, or axes:

(a) Never use a hammer, hatchet, or axe with a loose head or cracked handle.

(b) Always wear eye protection during drilling, chopping, or other operations involving the use of hammers, hatchets, or axes.

(c) Use the hammers, hatchets, or axes ***only for the purposes specified*** in Part 2.

(d) Never leave an unguarded hatchet or axe upon the sidewalk, highway, or property accessible to the public or any other place where these tools may constitute a potential source of injury to persons (particularly children), animals, or vehicles.

(e) Secure a firm footing before starting to chop. Avoid slippery surfaces and never stand on a fallen tree, pole, or log while chopping it. Check to see that the travel of the axe will have a wide berth, ie, plenty of space, making sure that its movement is not retarded by an obstruction such as a branch, etc. Clear the chopping space of all underbrush and small branches before swinging the axe in the normal

manner as one of the branches might deflect the blow and thus cause an accident. Do not permit the general public or employees to stand in front or in back of the path of an axe being swung. Also guard against the possibility of persons and animals being struck by chips that are likely to fly.

(f) Always swing an axe so the travel of the cutting edge is away from you. Stand at such a position that the axe will travel beyond the legs before it strikes the point where the cut is being made. Never chop between the feet.

(g) Never use an axe aloft in a tree.

(h) Never grasp an axe or hatchet so the hand is in contact with the cutting edge.

(i) Always keep the guards in place on axes or hatchets when not in use.

(j) Always store the hammers, hatchets, and axes in the proper truck compartment or storage place when not in use.

4. INSPECTION

4.01 Each employee should inspect the hammers, hatchets, and axes before each use to assure himself that they do not have defects which might impair their usefulness or safe handling.

4.02 Make sure the heads are not loose. If the wedge has worked up, tap the handle lightly to position the head, and then drive the wedge in further with a flat piece of steel. Improvised wedges such as nails, screws, etc, should not be used.

4.03 Inspect the heads of hammers and hatchets for the presence of burrs. Maintain a slight bevel around the striking faces of hammers and hatchets with a Whetstone. Replace all hammers having broken or chipped claws or chipped striking faces.

4.04 Inspect the handles of hammers, hatchets, or axes for indications of splitting or cracking. Also check for roughness or splinters.

4.05 Inspect the heads of hammers, hatchets, and axes for spread or cracked eyes, cracked blades, dull or nicked cutting edges, and for loose or missing wedges.

4.06 Make certain the guards are in good condition in order to properly protect the cutting edges of hatchets and axes.

5. MAINTENANCE

5.01 Hammer or hatchet heads which have begun to mushroom should be replaced immediately. Do not attempt to grind the bevel of the head on an emery wheel as the temper of the head may be destroyed.

5.02 Maintain the handles of hammers and hatchets smooth by sanding so the hand may be slid along the handle without irritation. If the ends of the handle tend to become frayed, file a slight bevel around the edge with a rasp. Immediately replace all split or splintered handles.

5.03 Wipe the heads of hammers and hatchets occasionally with an oily rag.

Hatchets and Axes

5.04 An electric emery or carborundum grinding wheel may be used for sharpening the cutting edges on hatchets or axes ***provided care is exercised*** to prevent developing excessive heat which may destroy the temper of the blade. Use only a very light pressure when applying the cutting edge against the grinding wheel and dip the head into a water coolant frequently during the grinding operation to prevent a temperature build-up.

Caution: Always wear special eye protection when using a grinding wheel.

5.05 Avoid the use of coarse grinding wheels which would remove too much of the metal from the blade of the hatchet or axe.

5.06 The hatchet or axe should be ground in such a manner that the original shape is maintained and the cutting edge is kept at the original curvature. The bit should be made correspondingly thinner as the head becomes shorter and both faces slightly rounded off from center to sides.

5.07 If a keener edge is desired than can be obtained on the grinding wheel, the edge

should be honed on an oilstone after the preliminary grinding process is completed.

5.08 Where an electric grinding wheel is not available, the cutting edge may be restored satisfactorily with the smooth cut side of a Combination H File.

5.09 If the hatchet or axe is sharpened by filing, maintain the original curvature of the cutting edge as described in 5.06. To sharpen the hatchet or axe with a file proceed as follow:

(1) Locate the bit of the hatchet or axe so the weight of your body can be applied when filing.

(2) Hold the file at a slight angle (approximately 20 to 30 degrees) to the center line of the surface being filed.

(3) Holding the file at both ends and maintaining firm even pressure, file away from the cutting edge. This will prevent hand injuries.

(4) Always raise the file from the surface being filed on the return stroke. This will prevent dulling of the file teeth.

5.10 No attempt should be made by the field forces to tighten a loose head of an epoxy-bonded axe. In such an event, return the axe for repairs in accordance with the established local routine.

6. DISPOSITION OF DEFECTIVE AXES

6.01 Axes that have developed the following defects should be withdrawn from use for repair or destruction:

(a) Split or cracked blade

(b) Spread or cracked eye

(c) Split, cracked, or broken handle

(d) Loose head on epoxy bonded axe

(e) Length of head less than 6-1/2 inches. Measurements to be taken from center of cutting edge to top of head.

6.02 Employees in the field should see that such tools in their possession are either returned to the storeroom properly tagged as defective or disposed of in accordance with the established local routine.