

TOOLS

4 LB. AXE

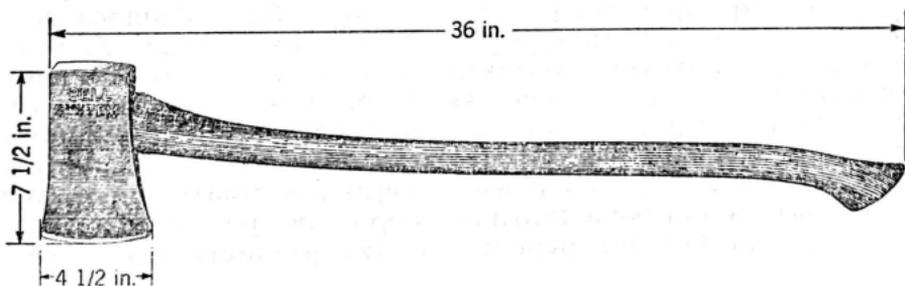
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1. SCOPE

1.01 This practice covers the use, care and maintenance of the Bell System standard 4 lb. axe. If an axe other than this type is in use, follow these instructions in so far as practicable.

2. STANDARD 4 LB. AXE

2.01 The standard axe consists of a 4 lb. head equipped with a crucible tool steel inlaid bit, suitably tempered and sharpened, and provided with a 36-inch hickory handle.



3. USE

3.01 The standard axe is intended for use in cutting off poles and car stakes, splitting logs, limbs, tree trunks, etc., felling trees, and other work where heavy cutting is required. It has not been 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.

3.02 Before starting to cut with an axe be sure the handle is securely wedged in the eye and the cutting edge is properly sharpened. Improvised wedges such as nails, screws, etc., should not be used for tightening the handle in the eye.

3.03 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, i.e., 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.

3.04 Always swing an axe so that the travel of the cutting edge is away from you. Stand in 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.

4. TRANSPORTING AXE

4.01 Proper care must be taken of axes in order that they will give satisfactory service and so that they will not cause injury or damage. Axes shall be properly placed in the compartment of the truck or tool chest provided for the purpose of protection.

5. INSPECTION ROUTINE

5.01 Upon receipt of and at frequent intervals thereafter, each axe shall be inspected in accordance with Part 6 in order to determine whether any fault has developed.

5.02 Each employee shall at all times assume the responsibility of determining that the axe in his possession is in good condition and its appearance does not indicate injury or defects sufficient to impair its usefulness or safe handling.

6. INSPECTION OF AXES

6.01 Axes should be examined to determine their condition, the important things to look for being as follows:

- (a) Dull blade or edge nicked
- (b) Split or cracked blade
- (c) Spread or cracked eye
- (d) Length of head less than 6-1/2 inches. (Measurement to be taken from center of cutting edge to top of head.)
- (e) Loose head
- (f) Wedge missing
- (g) Handle split, cracked or broken
- (h) Rough or splintered handle

6.02 If tools for repairing axes have not been provided and any of the above conditions are found to exist or if the condition of the axe is such that it does not appear satisfactory from a safety standpoint, it should be exchanged at once for one in good condition in accordance with the established routine.

6.03 If tools have been provided for making such repairs as encountered under (a), (e), (f) and (h) and if any of these conditions that warrant repairing are found to exist, the axe shall be maintained in accordance with Part 7.

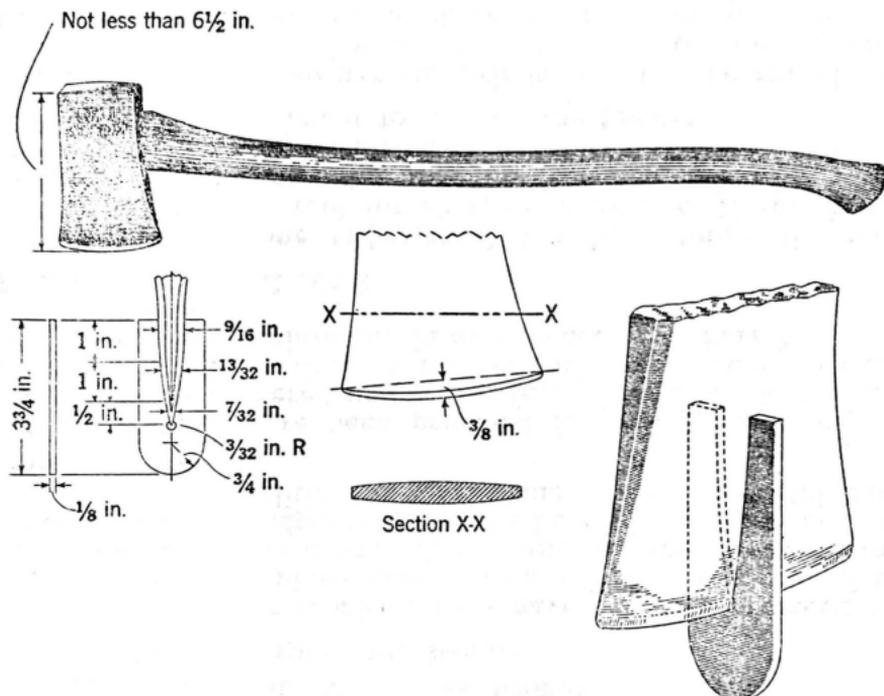
7. MAINTAINING AXE

7.01 A grindstone (whetstone) has been found the most satisfactory tool for sharpening an axe. If this is not available, the cutting edge may be "touched up" with a file. Never grind an axe on an emery wheel as the heat thus developed may be sufficient to destroy the temper.

7.02 In grinding an axe the grindstone shall be run slowly, using plenty of water. The direction of running shall be such that the stone will work against the edge of the tool. If water is being thrown from the face of the stone the indication is that the wheel is running too fast.

7.03 The axe shall be ground so that in so far as practicable its original shape is maintained, that is, the cutting edge shall be kept at the original curvature, the bit shall be made correspondingly thinner as the head becomes shorter, and both

faces slightly rounded off from center to sides as shown in the following cross sectional view. The dimensions for the taper are as shown. The use of an axe gauge is helpful in determining whether the proper taper has been obtained and may be made out of a piece of metal or fiber sheet.



7.04 If a keener edge than that obtained with a grindstone or file is desired, the edge should be honed on an oil stone.

7.05 If the axe is to be sharpened with a file, the cutting edge should be kept at the original curvature as outlined for grinding. In order to obtain a long stroke and to eliminate the need for exposing the fingers to the sharp cutting edge, a 10-inch second cut file should be used. The bit of the axe is relatively hard, which makes it desirable to locate the head in a position that will permit of applying the weight of the body on the file. The file should be held at a slight angle (approximately 20 to 30 degrees) to the center line of the surface being filed and sufficient pressure should be applied for the teeth to grasp the metal. In order to minimize injuries to the hands file away from the cutting edge holding the file securely

at both ends so that it can be easily steadied and its movement controlled at all times. The pressure should be evenly distributed and maintained throughout the forward stroke. On the return stroke, the file should be held slightly above the surface being filed in order not to dull the cutting teeth.

7.06 Maintain the handle smooth, by sanding, so that the hand can be slid along the handle without irritation. A slight bevel (using a rasp, spoke shave or pocket knife) should be maintained around the edge of the handle butt.

7.07 The head should be kept securely wedged to the handle. If the head is loose on the handle and the eye has not been opened, draw the head back by hammering on the grasp end of the handle and then drive the wedge in farther with a flat piece of steel.

8. DISPOSITION OF DEFECTIVE AXES

8.01 Axes that have developed the following defects shall be withdrawn from service for repair or destruction. Employees in the field shall see that such tools in their possession are either returned to the storeroom properly tagged as defective or, when instructed to do so by the supervisor, destroyed and disposed of on the job.

- (a) Length of head less than 6-1/2 inches. Measurements to be taken from center of cutting edge to top of head.
- (b) Split or cracked blade.
- (c) Spread or cracked eye.
- (d) Handle split, cracked or broken.

9. SAFETY PRECAUTIONS

9.01 The following safety precautions shall be observed when handling an axe.

- (a) Never grasp an axe so that the hand is in contact with the cutting edge.
- (b) Never use an axe aloft in a tree.
- (c) An axe should not be placed or left upon a highway, sidewalk or property accessible to the public, where vehicles may be damaged or where the axe may constitute a potential source of injury to persons (particularly children) or livestock.