

HAMMER

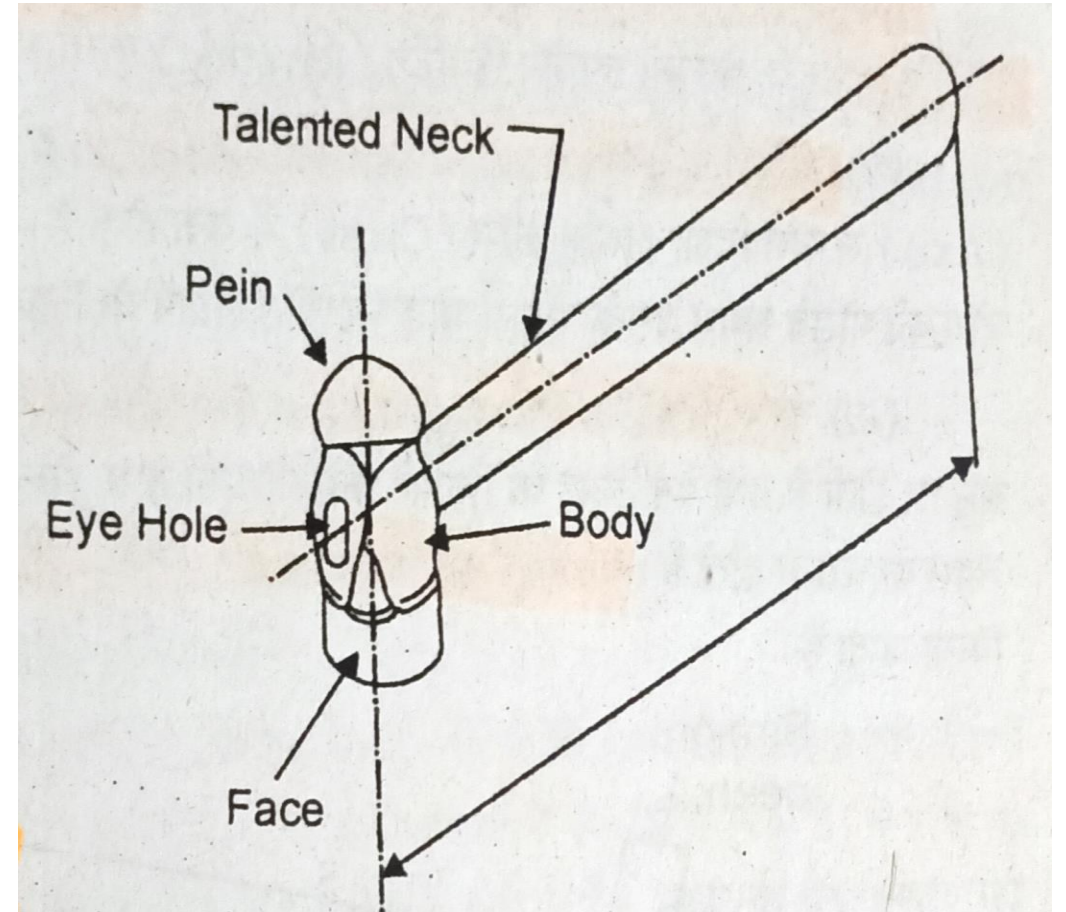
Hammer is common hand tool. It is used in workshop and daily life. It is a very essential tool of the workshop.

It is used for forging, chipping, riveting, marking, nail hammering and removal and straightening cracked job .

Its design consists of a peen at end , a face at the other end and an eye hole in the centre into which a handle is attached . Hammer are made from drop forged carbon steel, and its face and peen hard and temper

PART OF HAMMER

1. FACE
2. PEIN
3. EYE HOLE (ELLIPTICAL HOLE)
4. CHECK (BODY)
5. HANDLE



1 Pein – The pein is the is the other end of the head, It is used for shaping and forming work like riveting and branding. The pein is different shape

- **Ball pein**
- **Cross pein**
- **Straight pein**

2. **FACE-** The face is the striking portion .It is used for stroking while chipping, bending, punching etc

✓ Face and pein are case Hardend .

3. **Check-** The cheek is the middle portion of the hammer , the weight of the hammer is stamped here

✓ The portion of the hammer head is left soft.

4. Eye Hole – The eye hole is meant for fixing the handle . It is shaped to fit the handle rigidly

@ hameer are identified by the pein or weight

TYPES OF HAMMER

1. POWER HAMMER

2. HAND HAMMER

a. Ball pein hammer

b. Cross pein hammer

c. Straight pein hammer

d. Flat pein hammer

3. SLEDGE HAMMER

4. CLAW HAMMER

5. SOFT HAMMER

a. Mallet hammer

b. Raw hide hammer

c. Nayon hammer

1. POWER HAMMER

- Power hammers are used to forge heavy and large job.
 - ✓ This hammer is used for draw forging there are many Types of this hammer steam driven hammer, electric hammer, & pneumatic Hammer



2. Hand hammer

. Hand Hammer are made of cast steel, Drop forged carbon steel, or medium carbon steel and their face and pein are hard and tempered and the middle part which is called post it kept soft

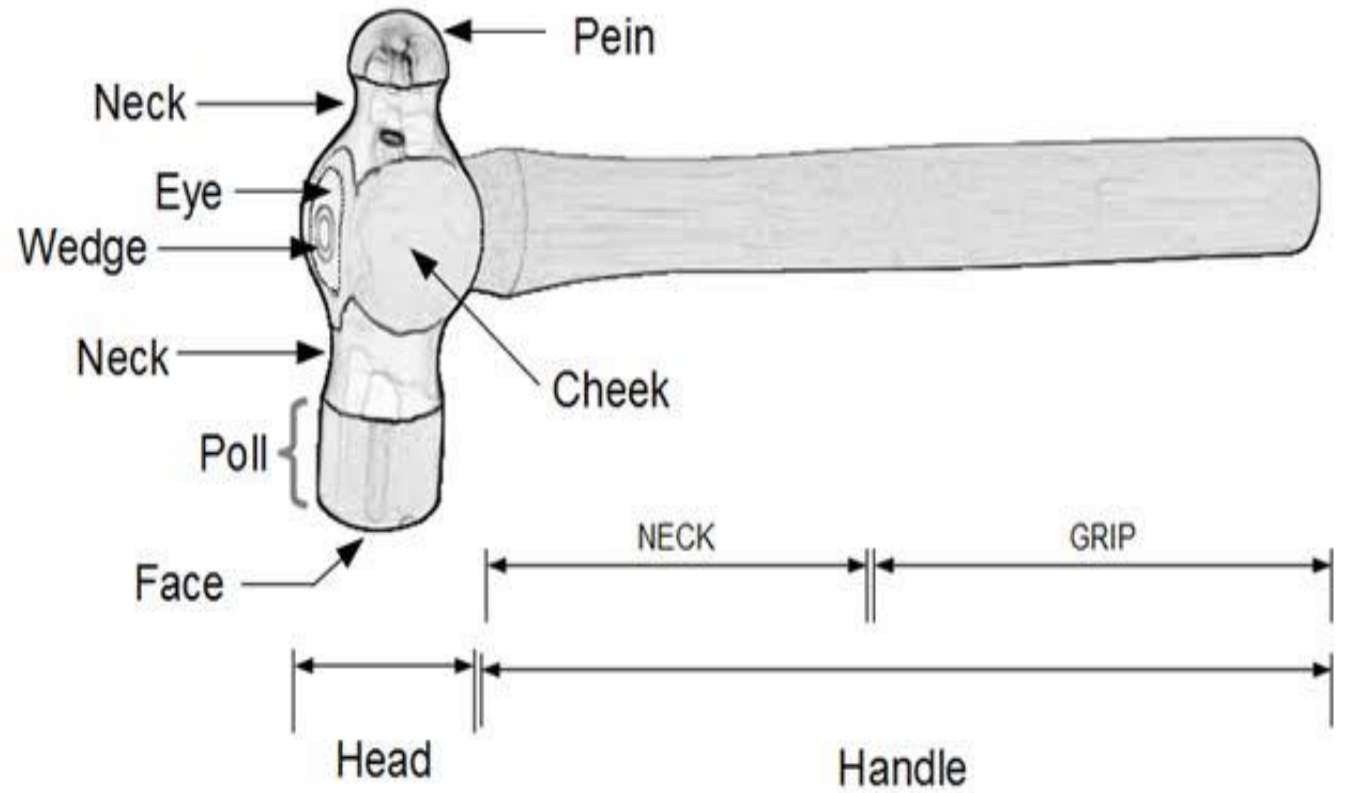
- The weight of hammer is stamped on the post or Cheek .



- An oval hole(eye hole or Elliptical hole) is made in the part of the post(cheek)
- Handle is fitted in the middle of the elliptical hole or wedges is knocked in the middle
- Handle on average 250 cm Should be 325mm long
Handle length should be 200 to 260mm for light hammer and 380 to 450mm for heavy hammer .
- The weight of 500 gm hammer , handle length is 325mm.
- For normal work or marking work used the weight of 250gm ($\frac{1}{4}$ kg or 0.25kg) hammer.

- A. Ball pein hammer-** The peen of this hammer is made like a hemispherical ball .
- This hammer is more commonly used in the workshop for simple work .
 - Ball pein hammers of 0.110 kg to 0.910 kg weight are mostly used in the workshop.
 - A Ball pein hammers They are used for Fas marking, Chipping and Riveting (for spreading the metal in all direction) etc.
 - 250g Ball Pein Hammer is used for marking.

BALL PEIN HAMMER



B. Cross pein hammer- The peen of this hammer is made at right angles to the handle or in the cross of the handle

- It is used to work in grooves or 'V' slots, in the inner corners of the job and in the same direction. It is used to spread the metal.
- It is available from 0.22 kg to 0.91 kg in weight



C.Straight pein hammer-The face of this hammer is flat and the pin is parallel or straight to the handle, they are also used like cross peen to make grooves, slots, channels etc.And work in the corners of the job (Used At Corners) is used.

- It is available in weight from 0.11kg to 0.91 kg.



D.Flat Pein hammer- This hammer has flat both face and peen, it is also called double face hand Hammer.

- They are also used for simple work.



3. SLEDGE HAMMER- Hammers of this class are heavier in weight than other hammers. Cubic hammers are mostly used for forging metal in ironsmith's food and while making heavy blows or cutting bars, angle iron, channels etc.

- It has flat faces on both sides
- It is available in weight from 2kg to 10kg, its handle length is from 600mm (up to 900mm).



4. CLAW HAMMER – It is mostly used by carpenters to remove nails etc. from wood. Its face is flat, but the pin is inclined towards the handle, in the middle of it there is a slot in which the nail is trapped and pulled out.



A.Mallet hammer – These are made of hard wood such as: - Tamarind, Shisham, Keekar (Babul), Teak etc.

- They are used to lightly hit the metal and to bend or straighten the sheet.
- The specification of the mallet is done by the diameter and the size of the face (Diameter: - 50mm, 75mm, 100mm)



B.Raw hide hammer – This hammer are generally used where any part of machine is to be fitted



C.Nylon hammer – This type of hammer is used to assemble high finish jobs or parts.

→ It is mainly used in aeronautic shop or modern toolroom etc.

→ The body of this hammer is made of steel and on both ends .

→ The rigid plastic pieces are fitted to the body according to the hammer size.



5. Soft hammer – These types of hammers are often made from soft metals like copper, brass, lead etc. This hammer is used where the machined finish parts need to be fitted with normal stick.



PRECAUTIONS

1. Before working, it should be checked that there is no oil or grease on the face or handle of the hammer.
2. The hammer should not be used without a wedge.
3. Do not use hammers with broken handles or protruding faces.
4. The hammer should be kept about 15 to 30 mm from the end of its handle while working. Should be caught.
5. While hitting with a hammer, one should usually look at the place of injury and not towards the hammer.