

Fig. 1.

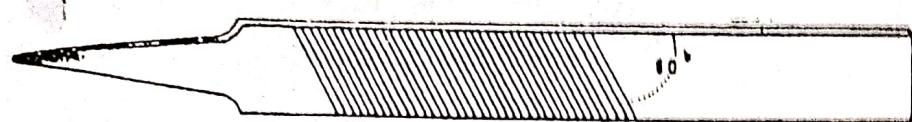


Fig. 2.

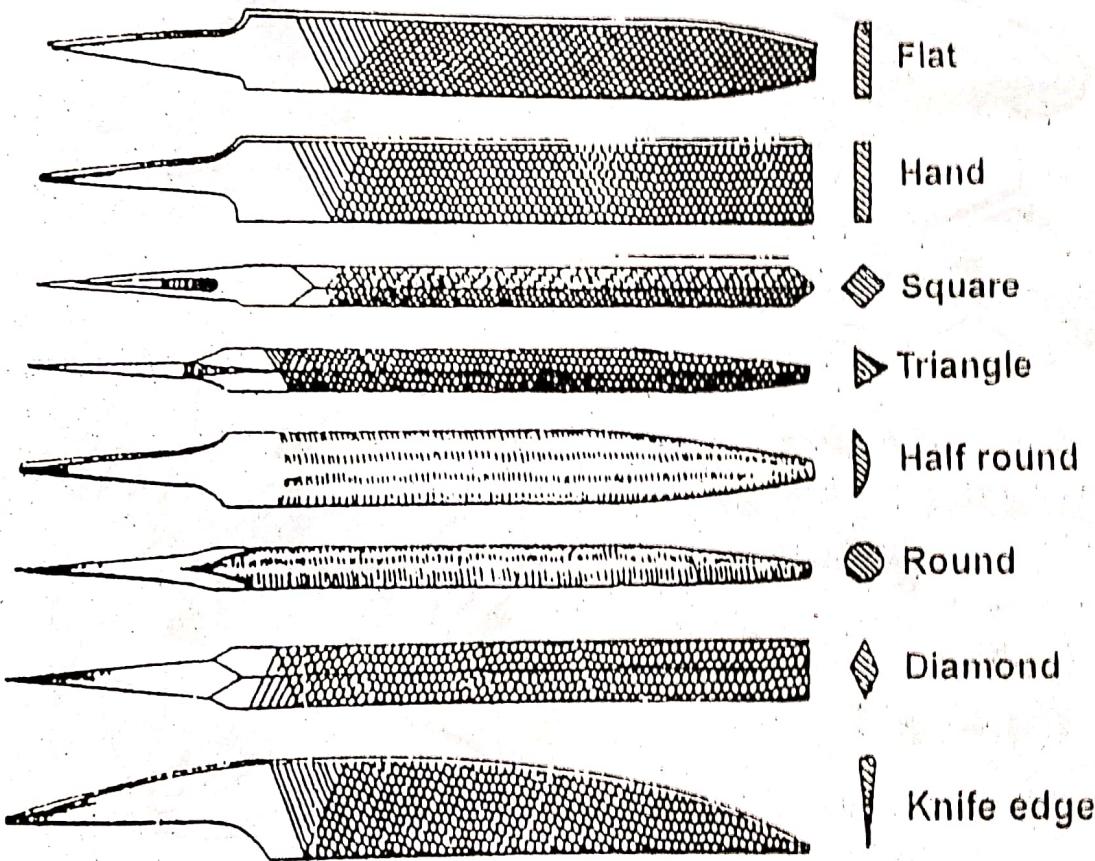
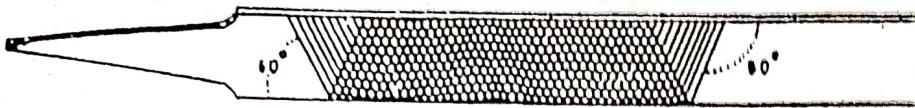


Fig. 3.

Fig. 1 Parts of a File

Fig. 2 Single cut and double cut file

Fig. 3 Shapes of file

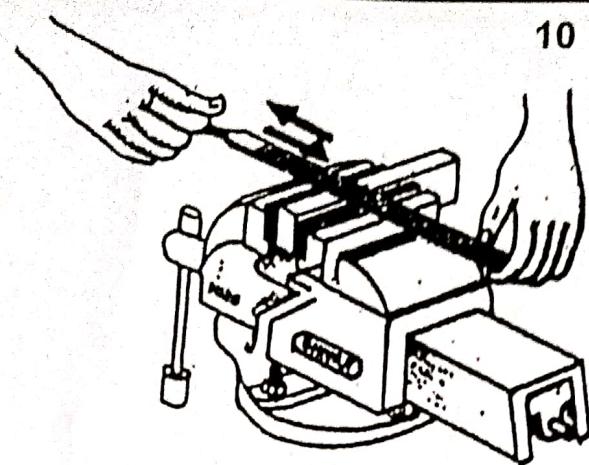
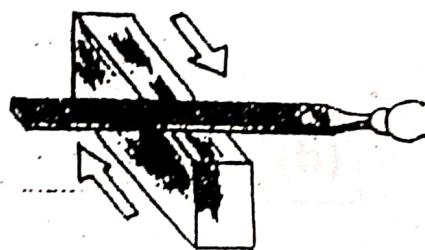
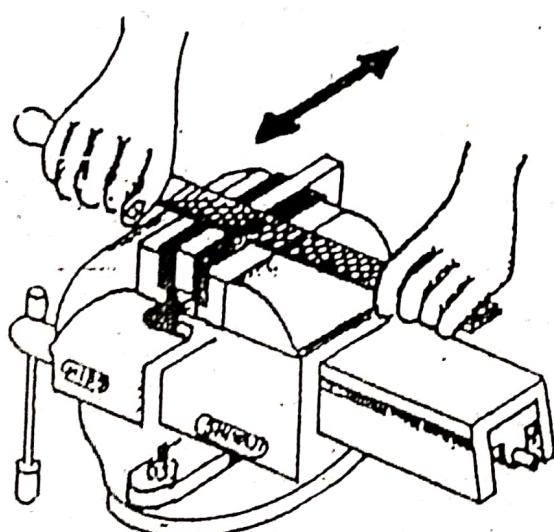
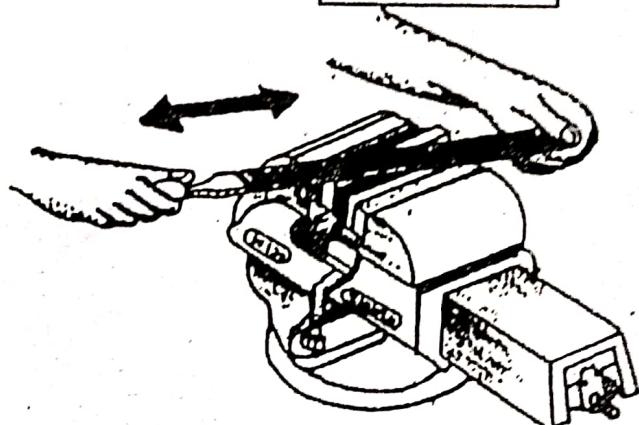
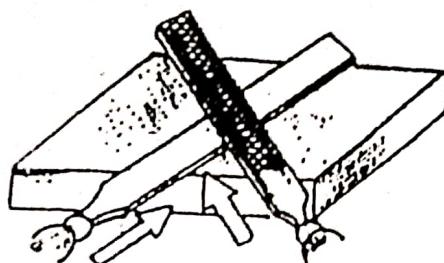
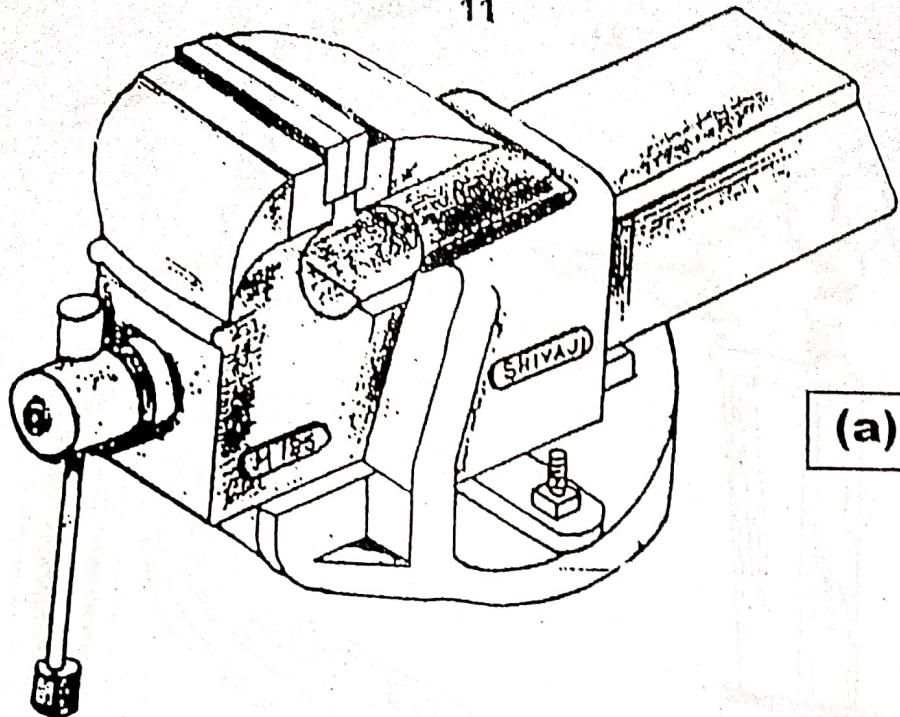
Fig. 4.(a)**Fig. 4.(b)****Fig. 4.(c)**

Fig. 4 Method of filing.

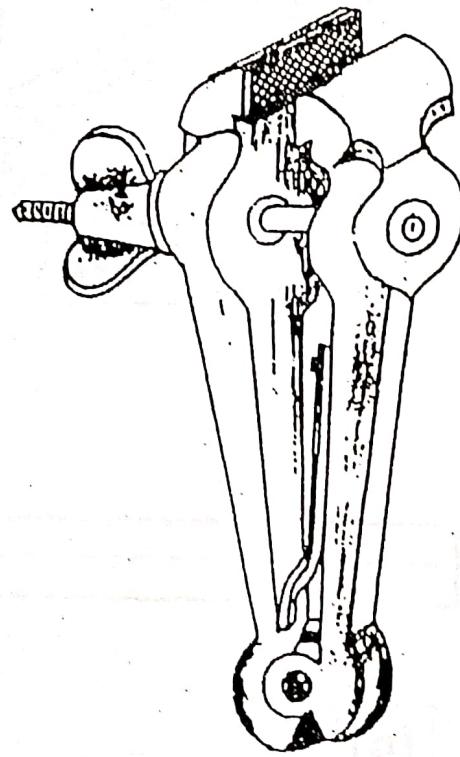
(a) Straight filling

(b) Cross filling

(C) Draw filling



(a)

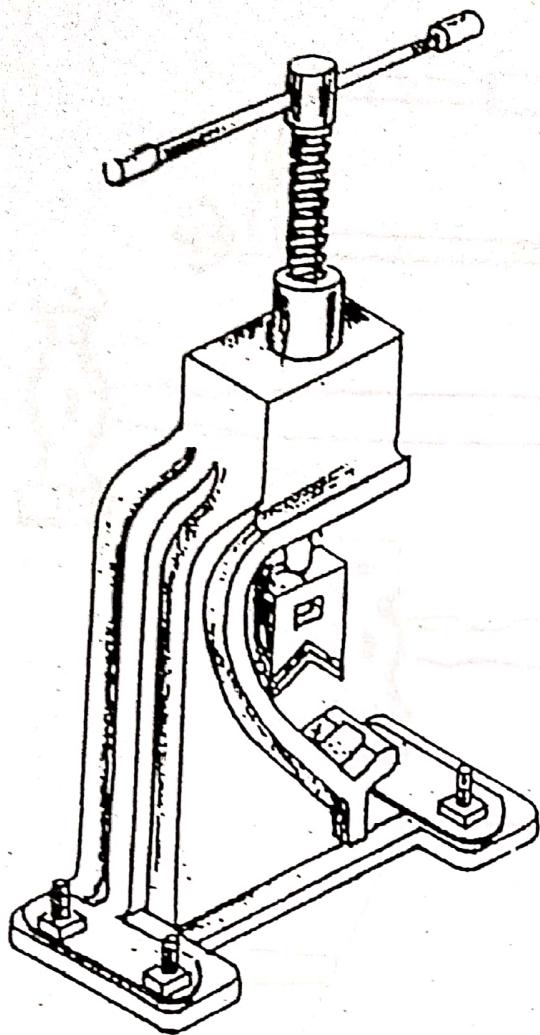


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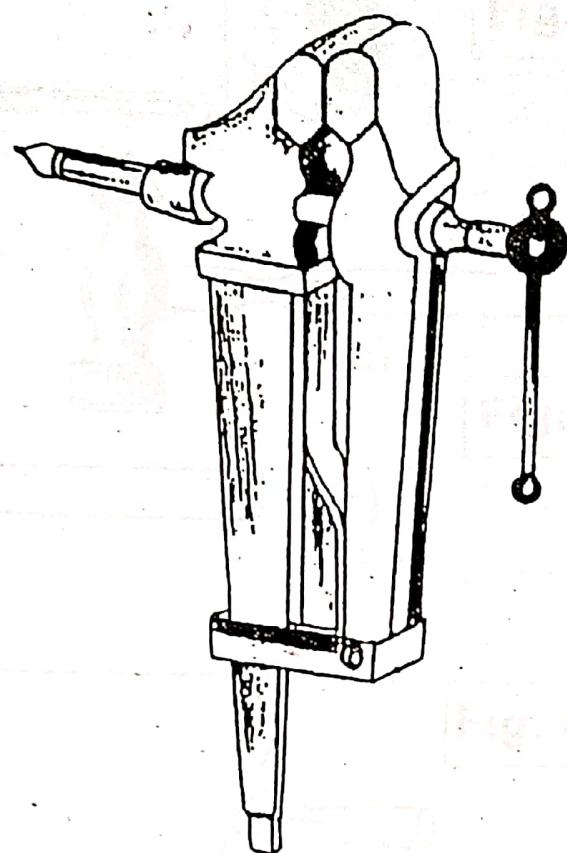
Fig. 5 Vices

(a) Bench Vice

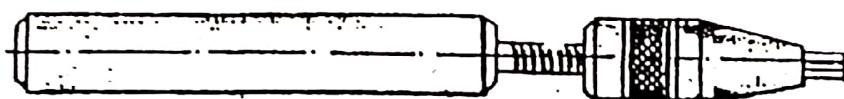
(b) Hand Vice



(c)



(d)



(e)

Fig. 5 Vices

(c) Pipe Vice

(d) Leg Vice

(e) Pin Vice

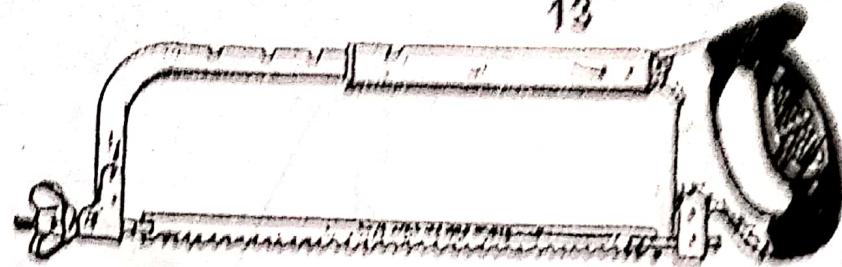
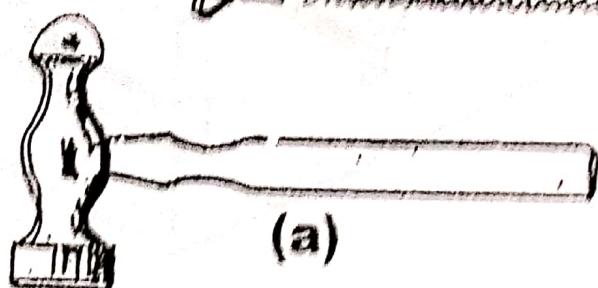
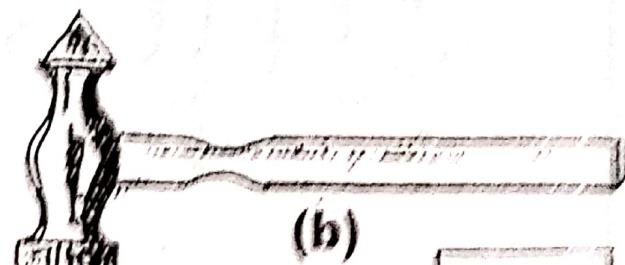


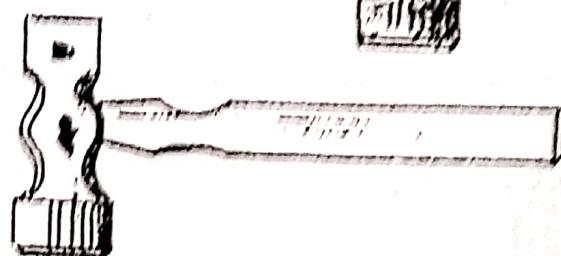
Fig. 6



(a)



(b)



(c)

Fig. 7

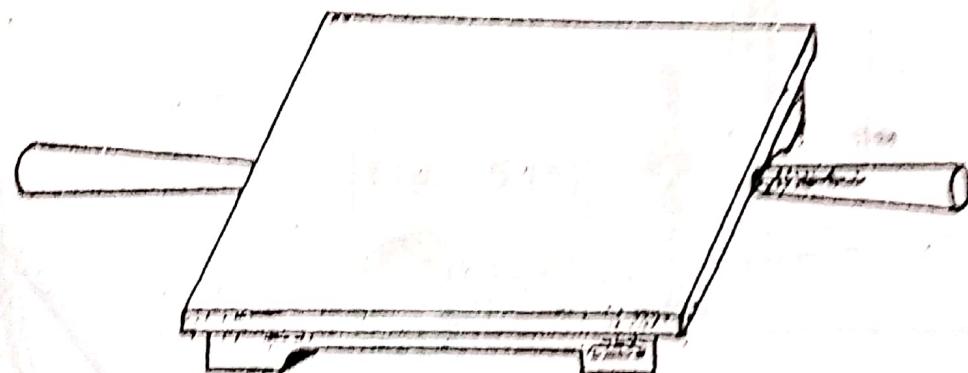


Fig. 8



Fig. 9



Fig. 10

Fig. 6 Hack Saw

Fig. 7 (a) Ball peen hammer

Fig. 7 (b) Cross peen hammer

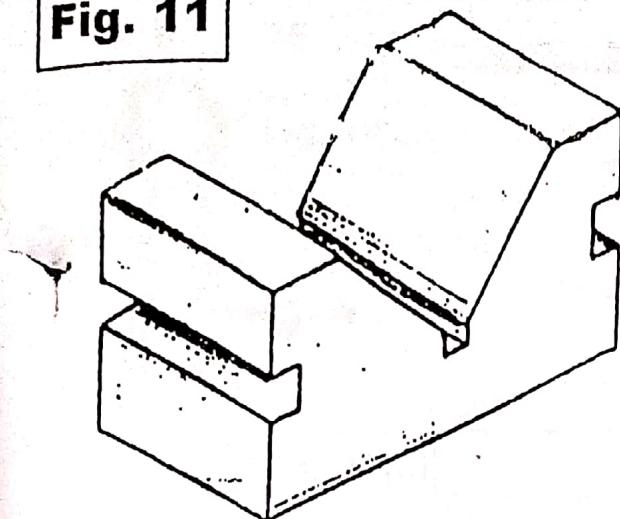
Fig. 7(c) Straight peen hammer

Fig. 8 Surface Plate

Fig. 9 Scriber

Fig. 10 Centre Punch

Fig. 11



14

Fig. 12

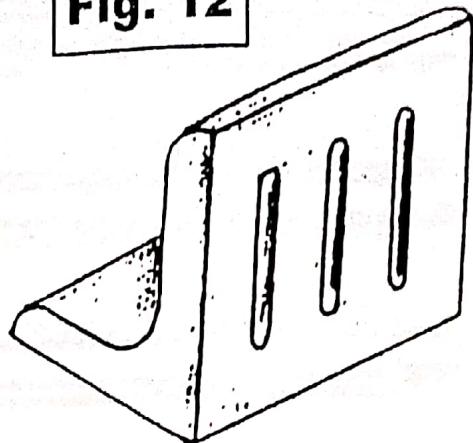


Fig. 14

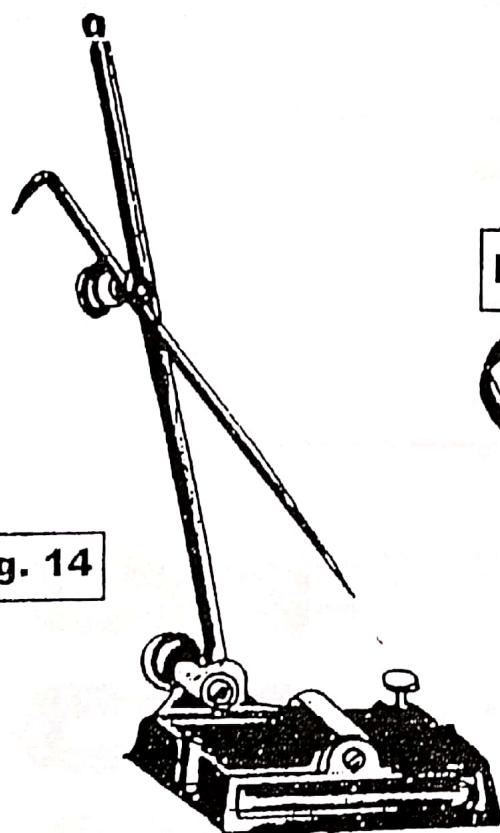


Fig. 15 (a)

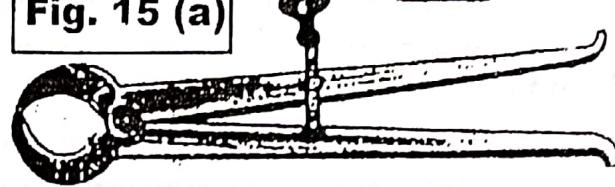


Fig. 15 (b)

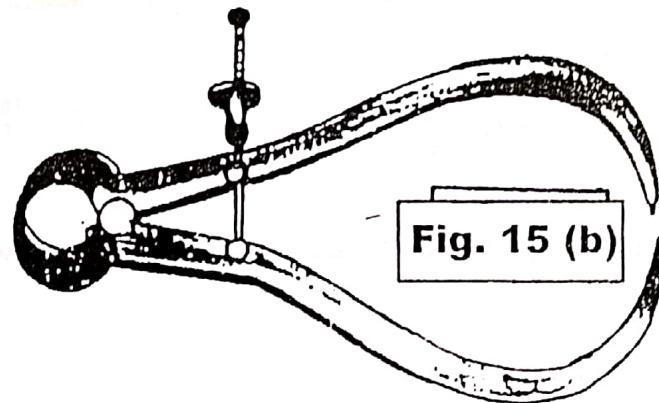


Fig. 11 V Block

Fig. 14 Marking Block

Fig. 12 Angle Plate

Fig. 15 (a) Inside Caliper

Fig. 13 Square

Fig. 15 (b) Outside Caliper



Fig. 16

Fig. 17(a)

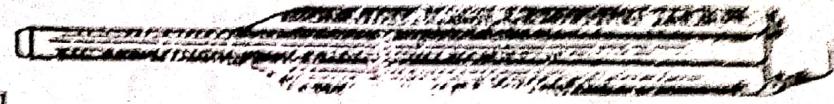


Fig. 17(b)

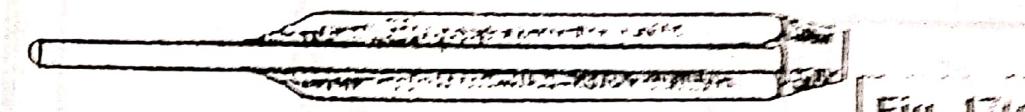


Fig. 17(c)

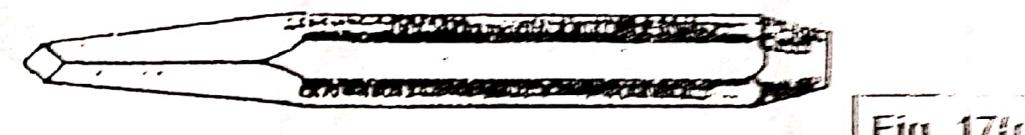
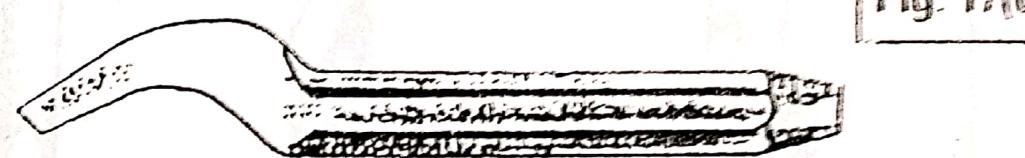


Fig. 17(d)

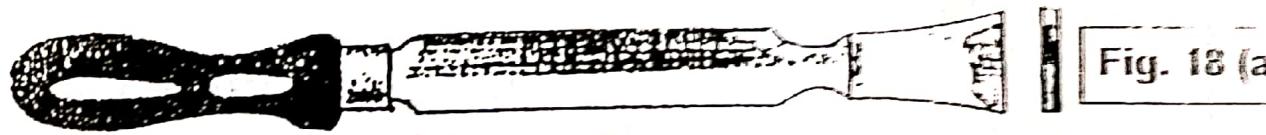
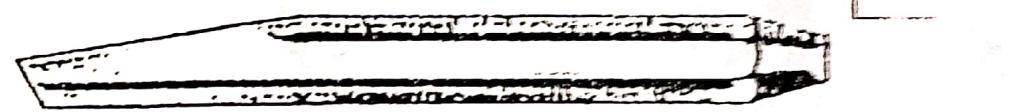


Fig. 18 (a)

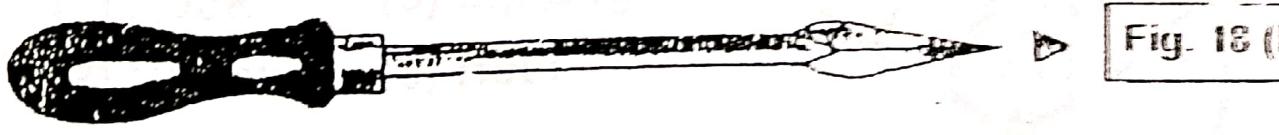


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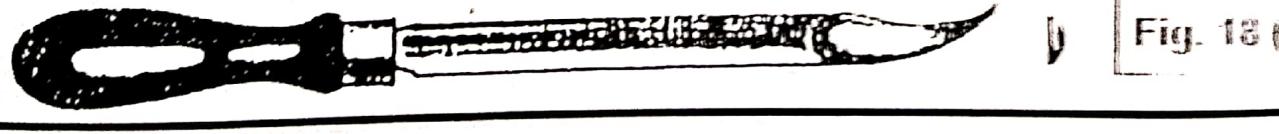
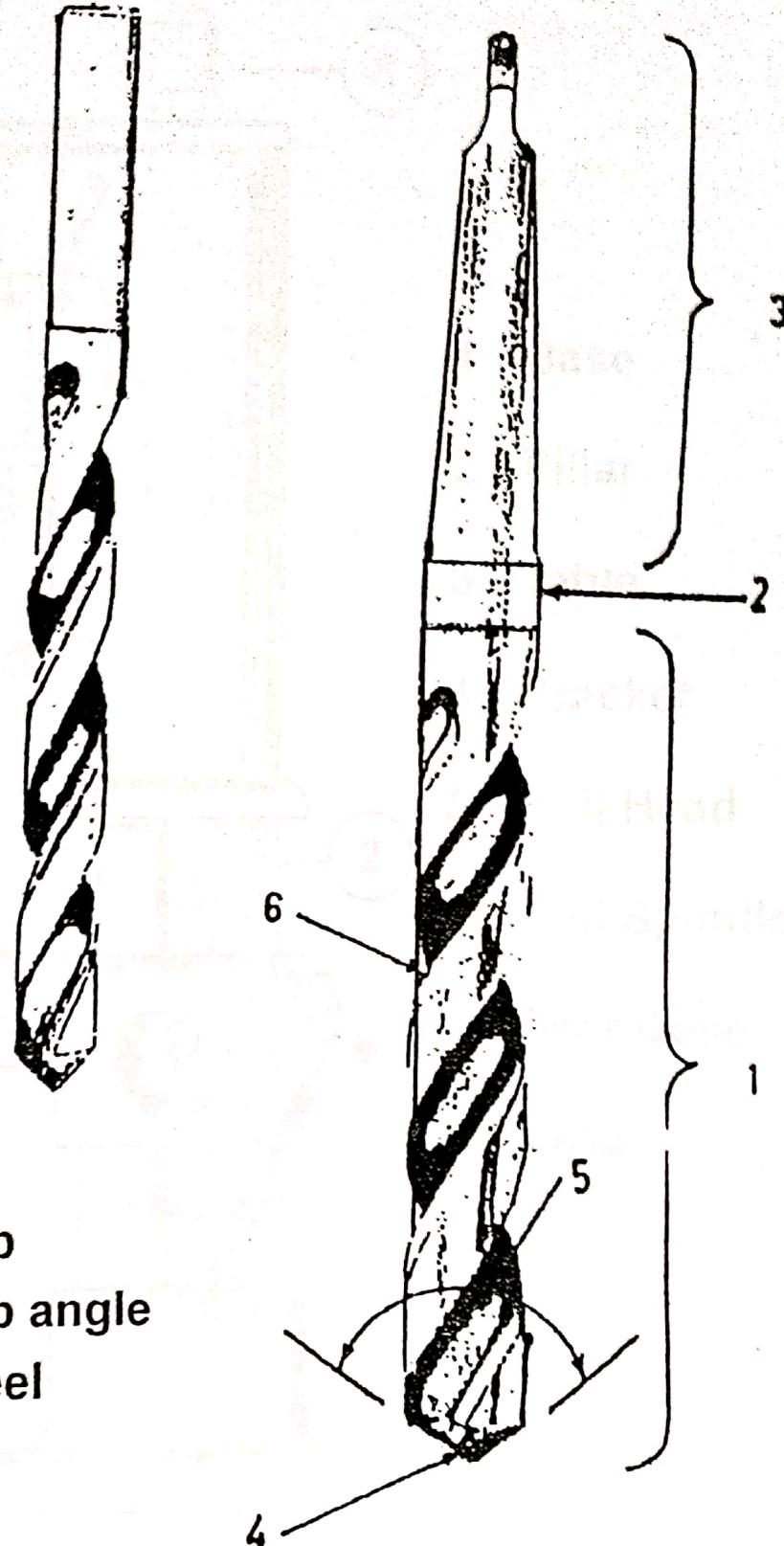


Fig. 18 (c)

Fig. 16 Divider**Fig. 17 (a) Cross-cut Chisel****Fig. 17 (b) side Chisel****Fig. 17 (c) Half round Chisel****Fig. 17 (d) Diamond Point Chisel****Fig. 18 (a) Flat Scraper****Fig. 18 (b) Triangular Scraper****Fig. 18 (c) Half -round Scraper**

Fig. 19(a)**Fig. 19 (a) Flat Drill****Fig. 19 (c) Parallel shank Drill****Fig. 19 (c) Taper shank Drill**

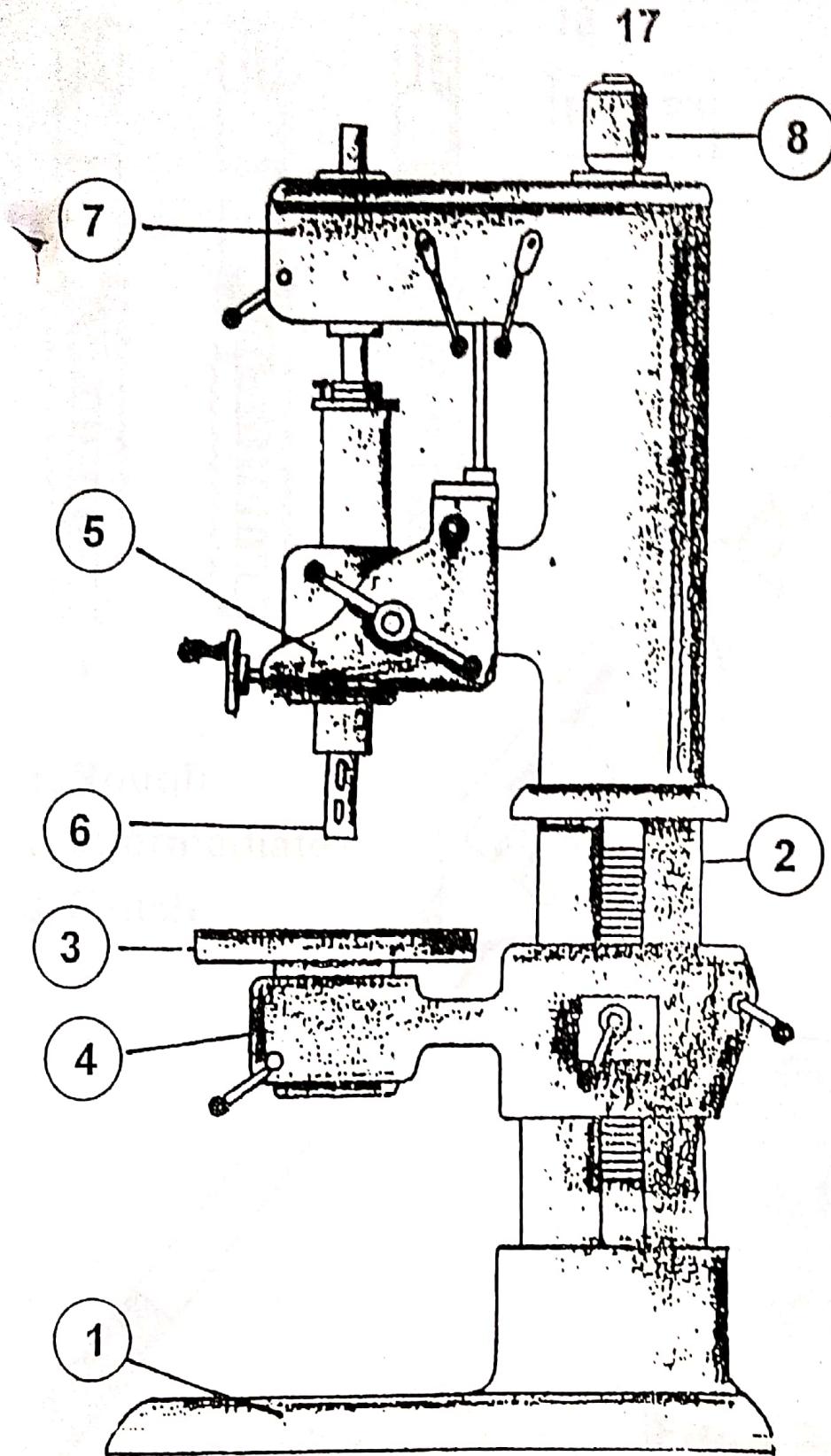
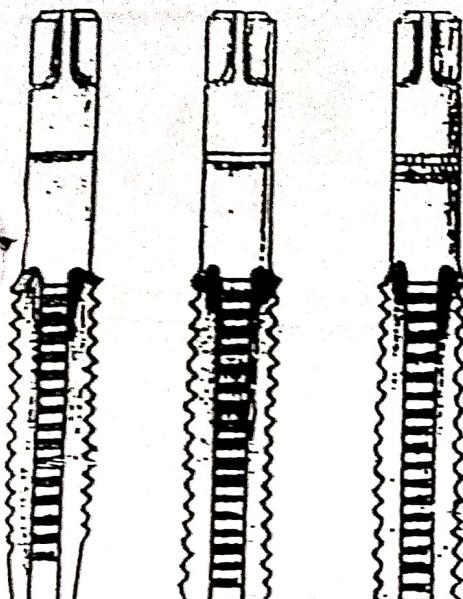


Fig. 20

Pillar Drilling Machine



1. Rough
2. Intermediate
3. Finish

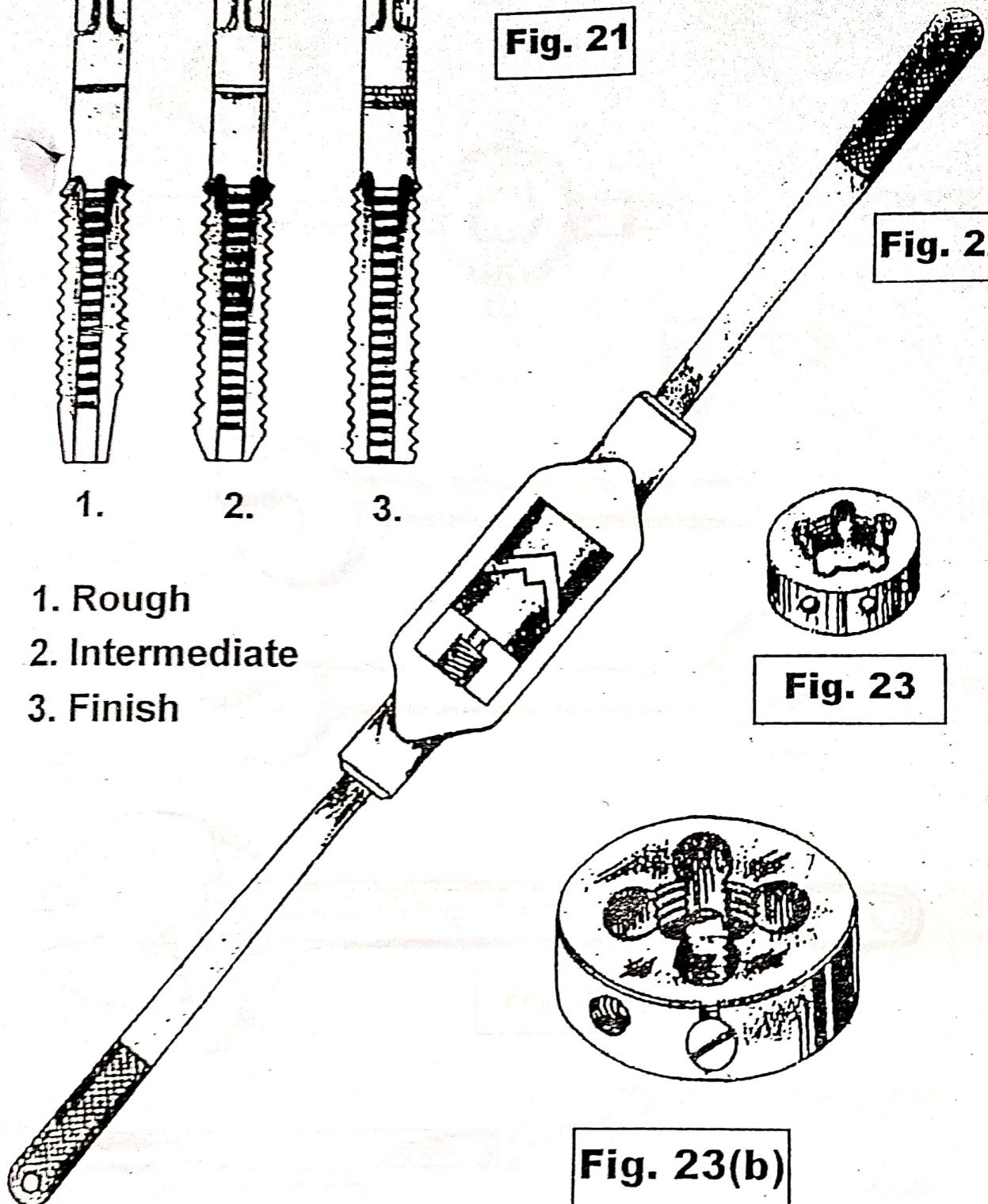
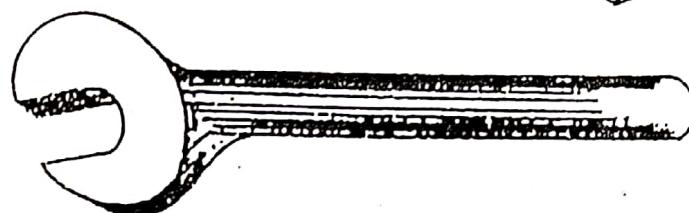
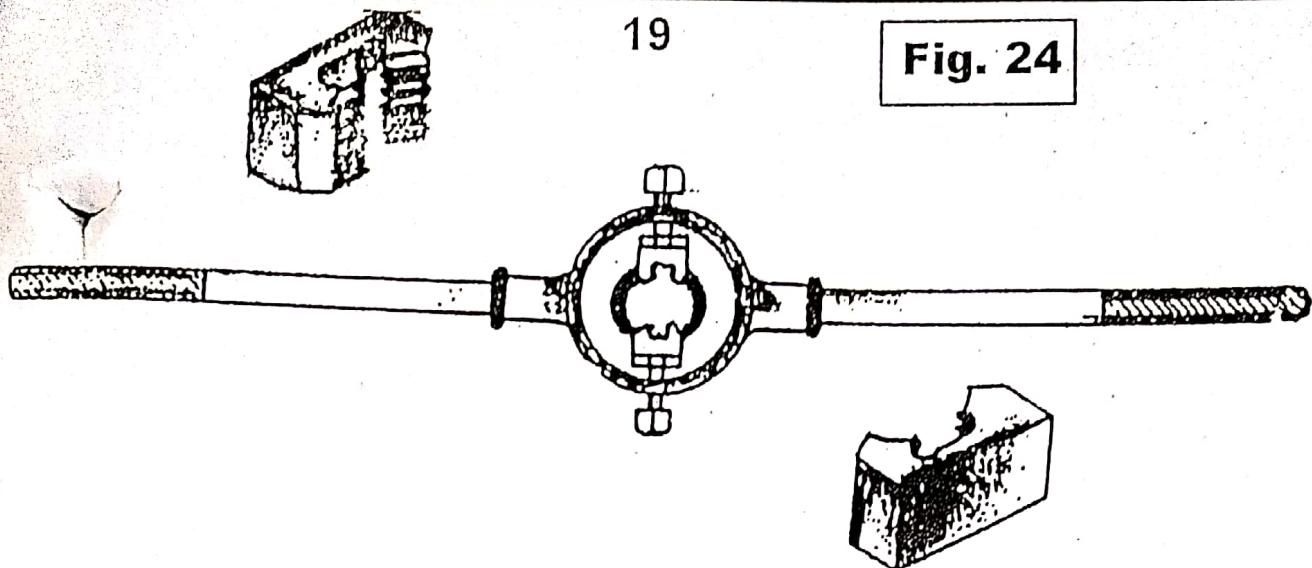
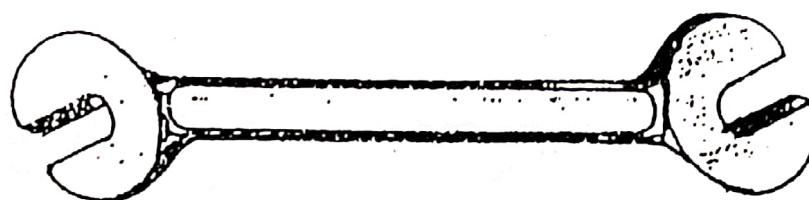
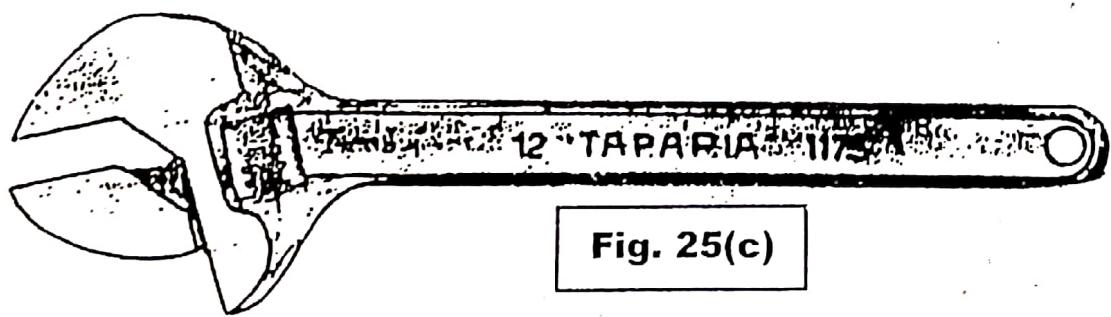
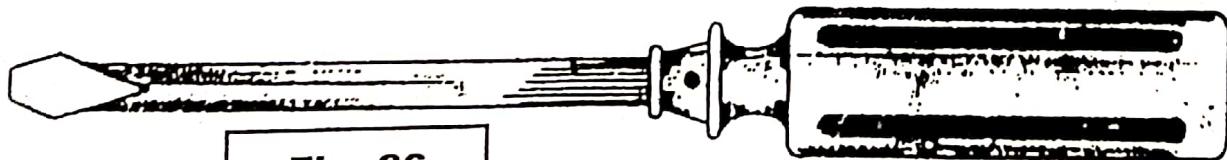


Fig. 21 Tap Set

Fig. 23 (a) Solid die

Fig. 22 Wrench

Fig. 23 (b) Adjustable Split die

Fig. 24**Fig. 25(a)****Fig. 25(b)****Fig. 25(c)****Fig. 26****Fig. 24 Two Piece die****Fig. 25 (c) Screw spanner****Fig. 25(a) Fix Spanner (one side)****Fig. 26****Screw driver****Fig. 25(b) Fix Spanner (one side)**

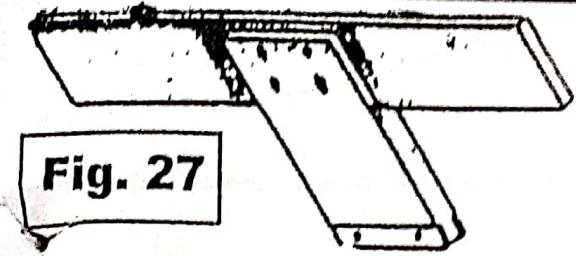


Fig. 27

28

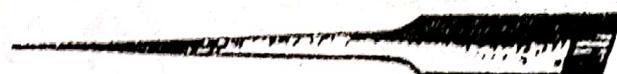


Fig. 30

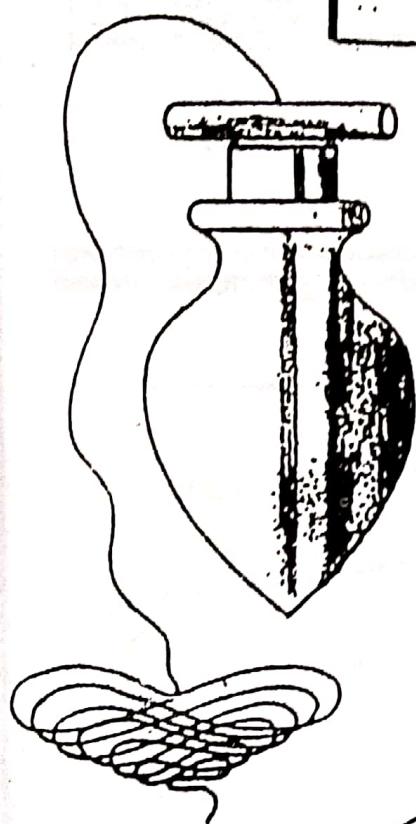


Fig. 32

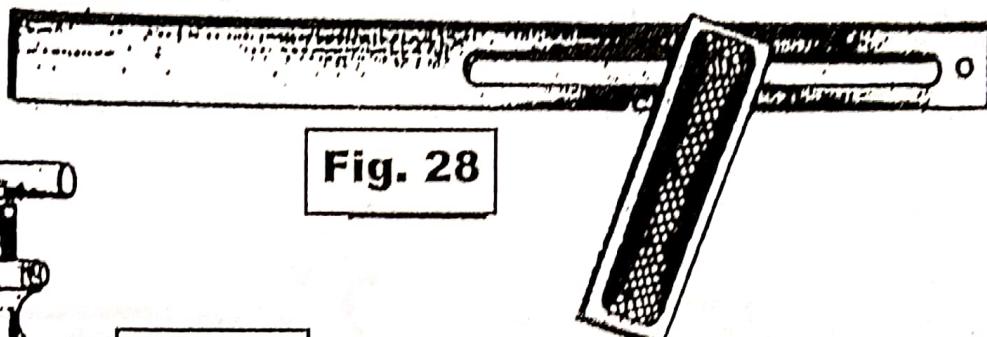


Fig. 28

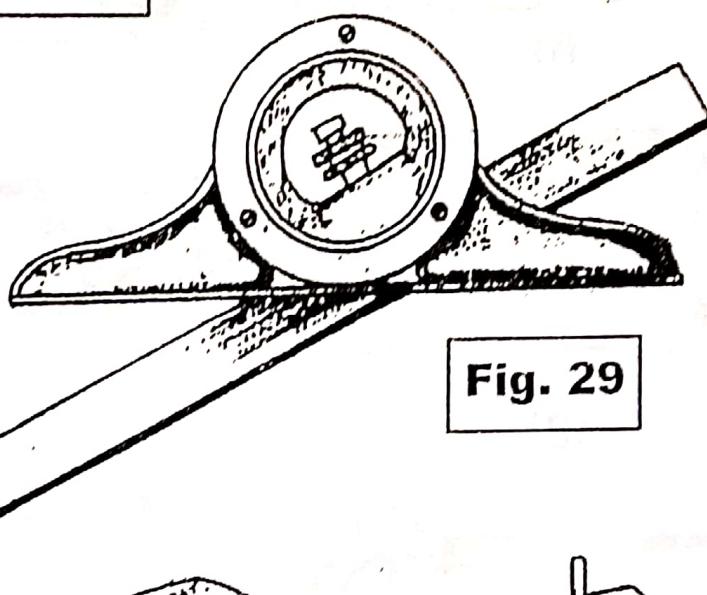


Fig. 29

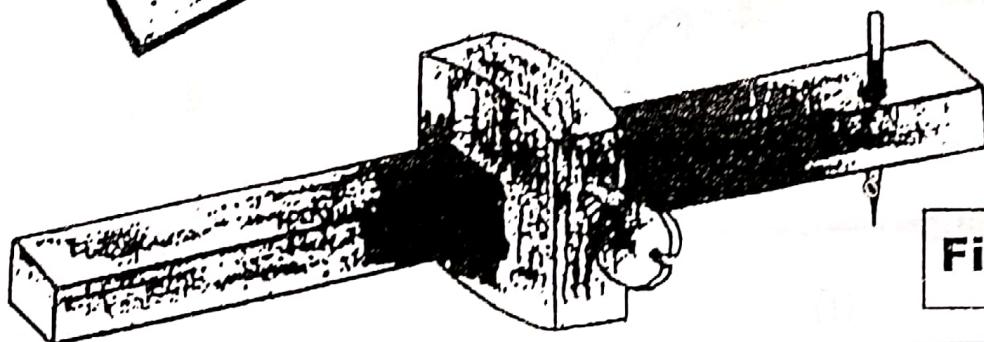


Fig. 31

Fig. 27 Mitre Square

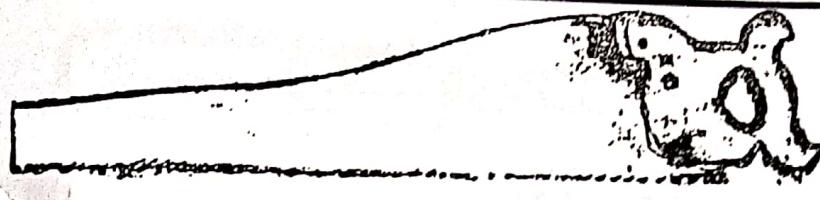
Fig. 30 Marking Knife

Fig. 28 Bevel Square

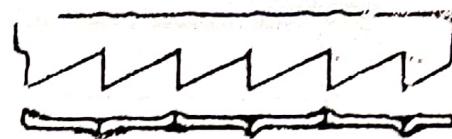
Fig. 31 Marking Guage

Fig. 29 Combination Square

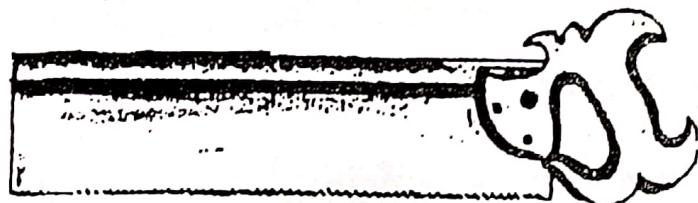
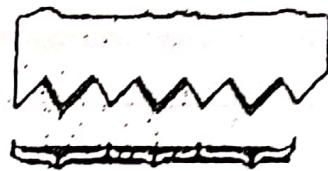
Fig. 32 Plums bob



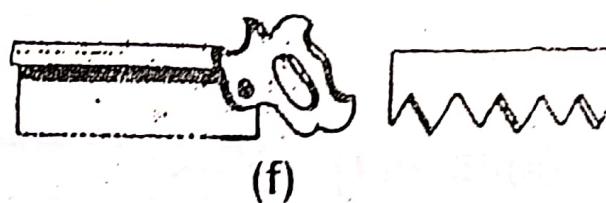
(a)



(b)



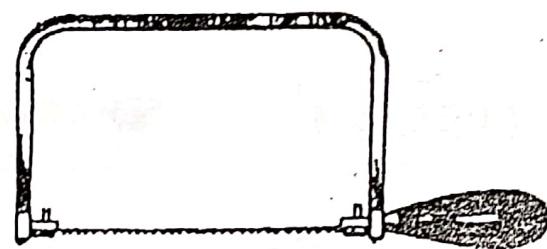
(c)



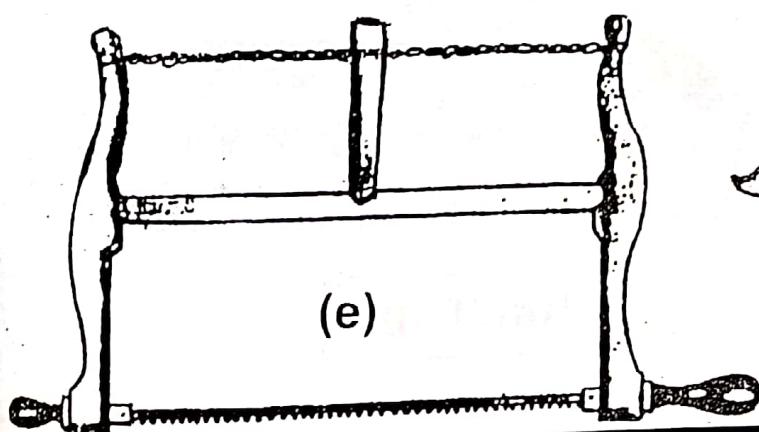
(f)



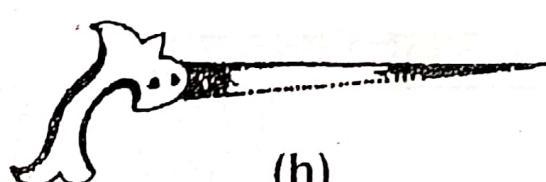
(d)



(g)



(e)



(h)



(i)

Fig. 33 Saws

(a) Rip Saw

(d) Panel saw

(g) Coping Saw

(b) Cross cut hand saw

(e) Bow Saw

(h) Compass Saw

(c) Tenon or Back Saw

(f) Dovetail Saw

(i) Pad or key hole Saw



Fig. 34(a)



Fig. 34(b)

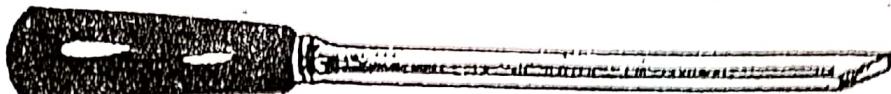


Fig. 34(c)

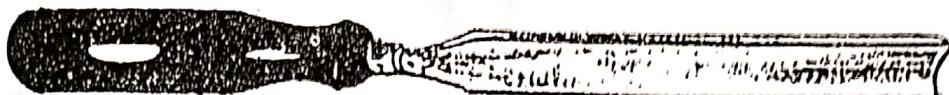


Fig. 35(a)



Fig. 35(b)

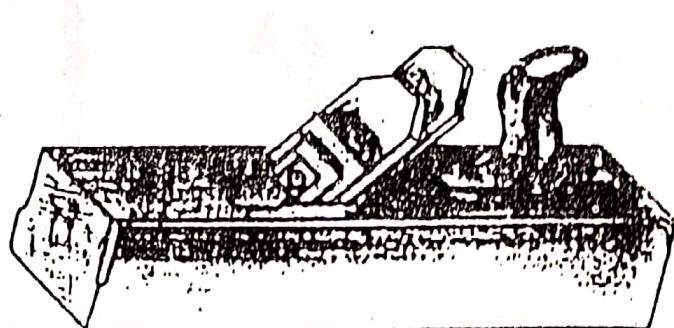


Fig. 36(a)

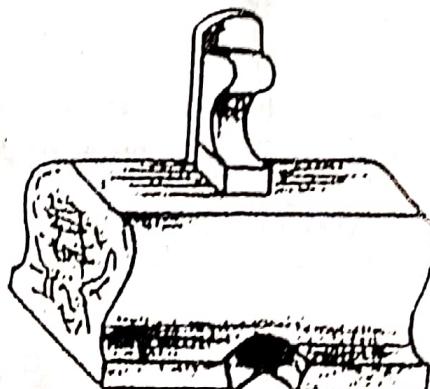


Fig. 36(b)

Fig. 34 (a) Firmer Chisel**Fig. 35 (b) Inside Gouge****Fig. 34 (b) Belved edge firmer Chisel****Fig. 34 (c) Mortise Chisel****Fig. 35 (a) Jack Plane****Fig. 35 (a) Outside Gouge****Fig. 36 (b) Router**

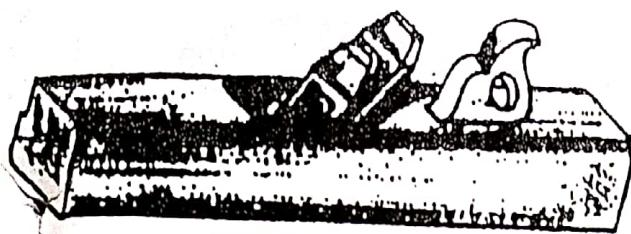


Fig. 36(c)

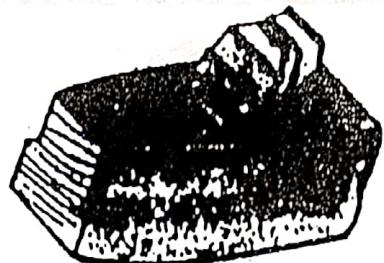


Fig. 36(d)



Fig. 36(e)

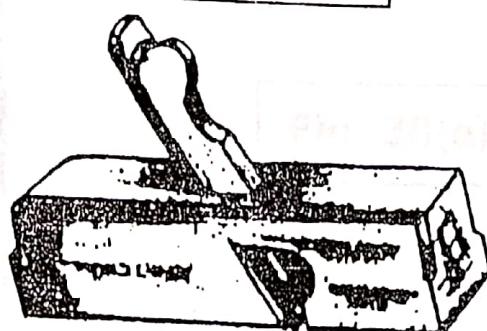


Fig. 36(f)



Fig. 37(a)

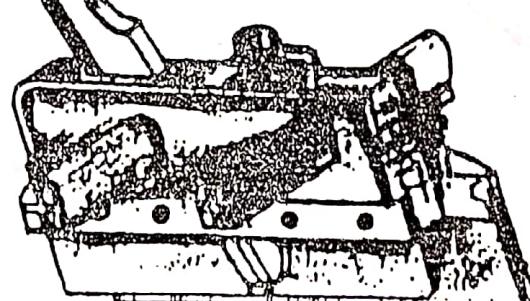


Fig. 36(g)



Fig. 37(b)

Fig. 36 (c) Trying Plane**Fig. 36 (d) Smoothing Plane****Fig. 36 (e) Spoke Shave****Fig. 36 (f) Rebate Plane****Fig. 36 (g) Plough Plane****Fig. 37 (a) Gimlet****Fig. 37 (b) Bradawl**

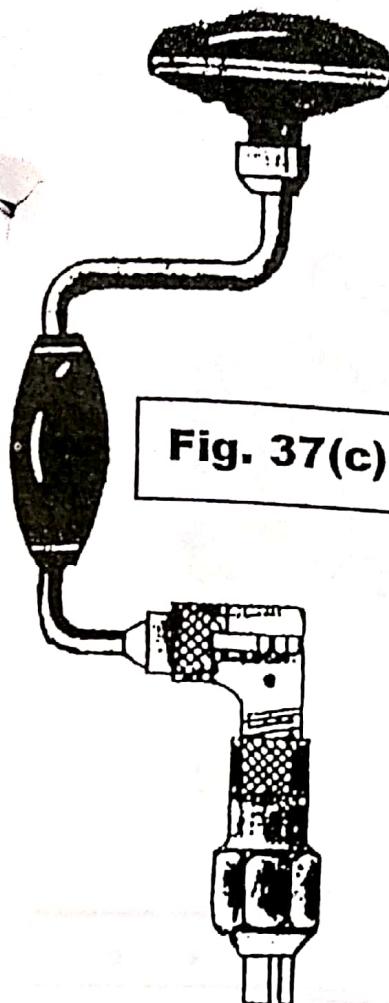


Fig. 37(c)

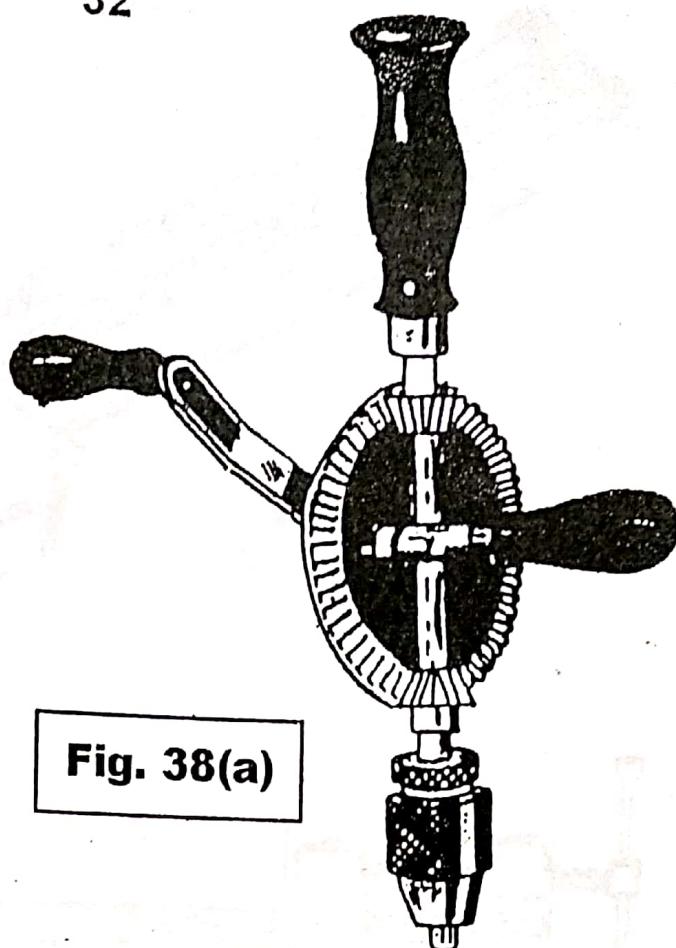


Fig. 38(a)

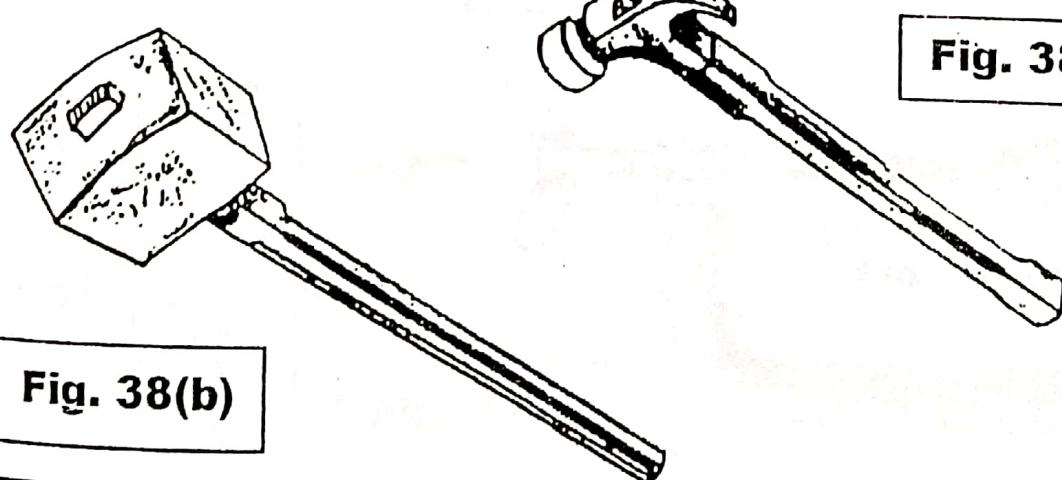


Fig. 38(b)

Fig. 37 (c) Ratchet Brace

Fig. 37 (d) Wheel Brace

Fig. 38 (a) Claw Hammer

Fig. 38 (b) Mallet

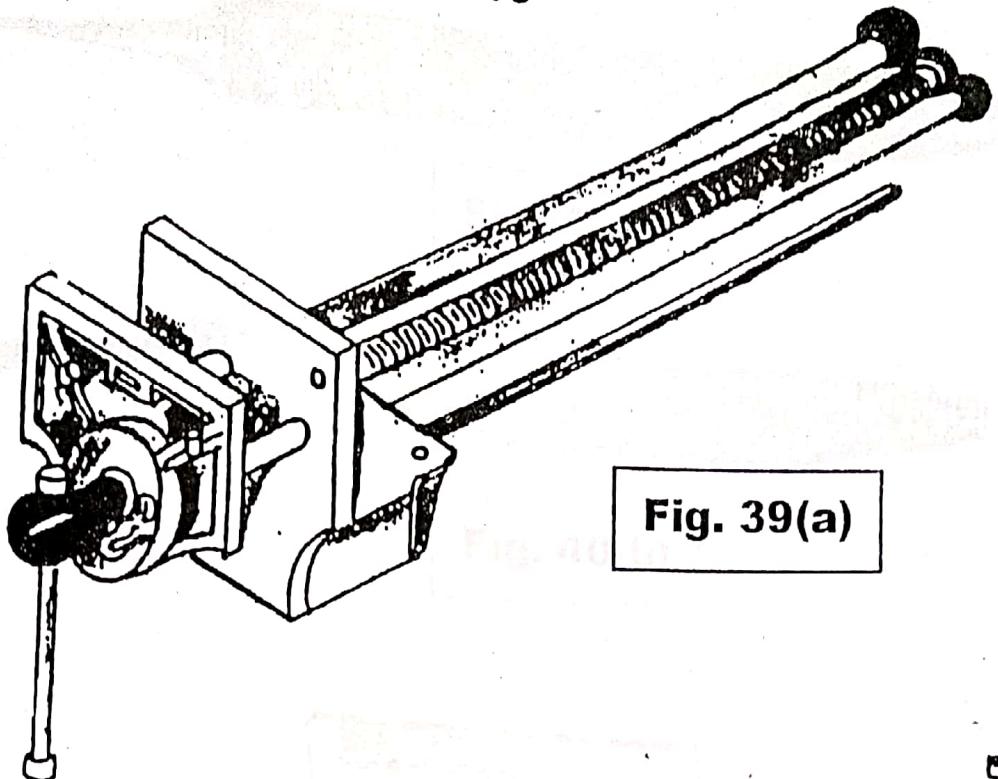


Fig. 39(a)

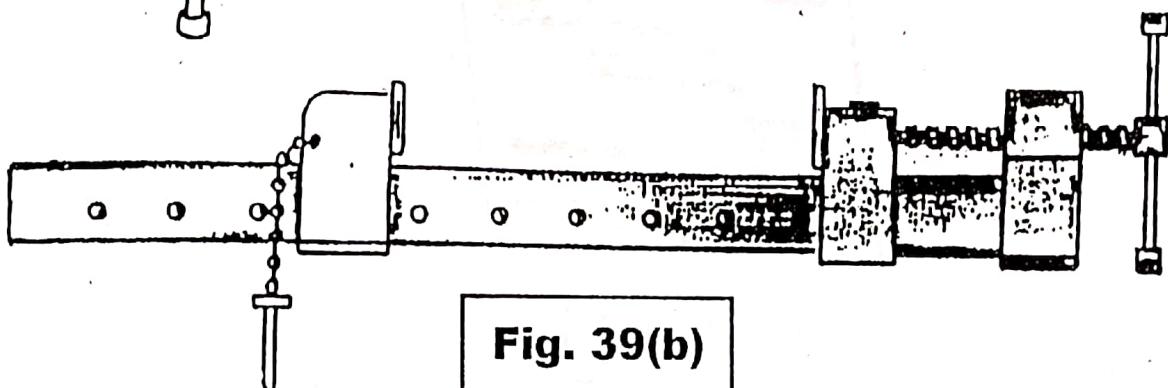


Fig. 39(b)

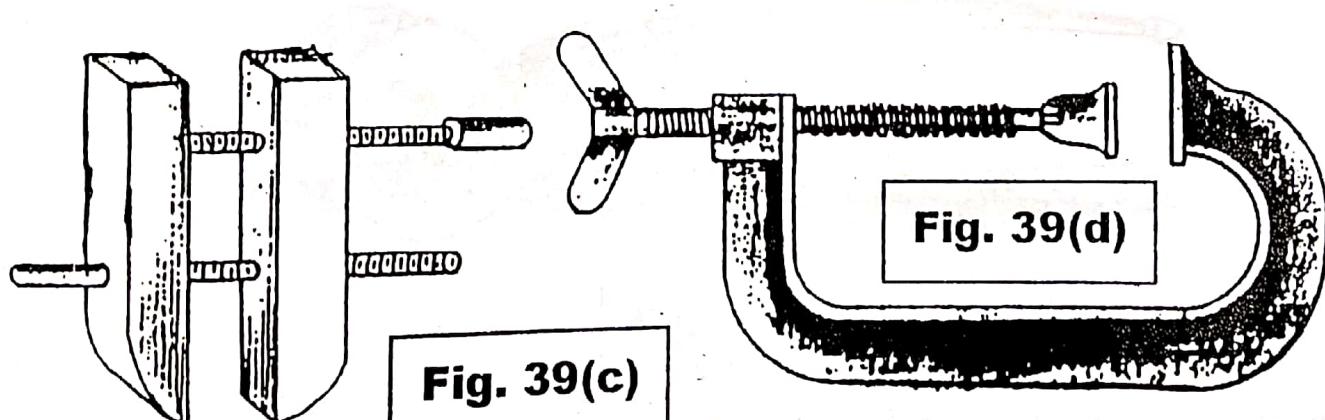


Fig. 39 Holding tools

Fig. 39 (a) Bench Vice

Fig. 39 (c) Hand Screw

Fig. 39 (b) Sash Cramp

Fig. 39 (d) G - Cramp



Fig. 40(a)

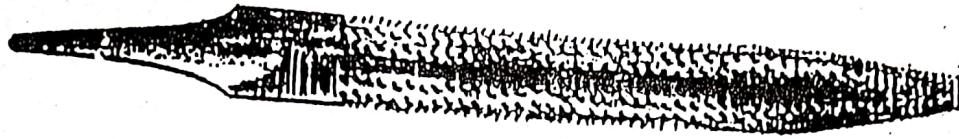


Fig. 40(b)

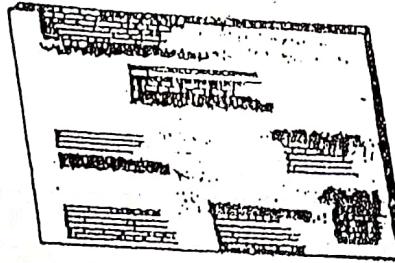


Fig. 40(c)

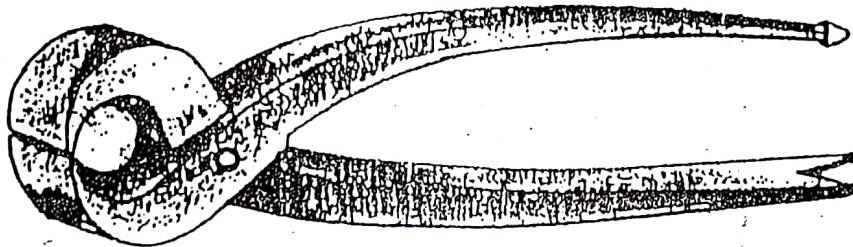


Fig. 40(d)

Fig. 39 Holding tools

Fig. 40 (a) File

Fig. 40 (b) Rasp

Fig. 40 (c) Scraper

Fig. 40 (d) Pincer

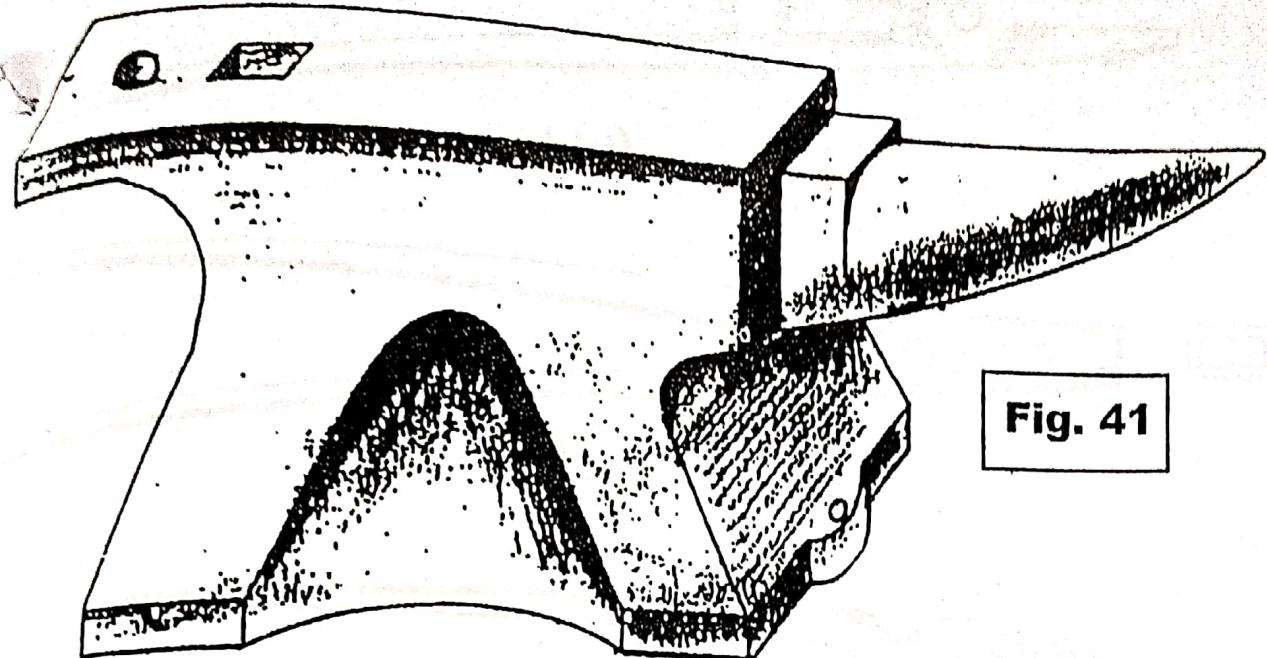


Fig. 41

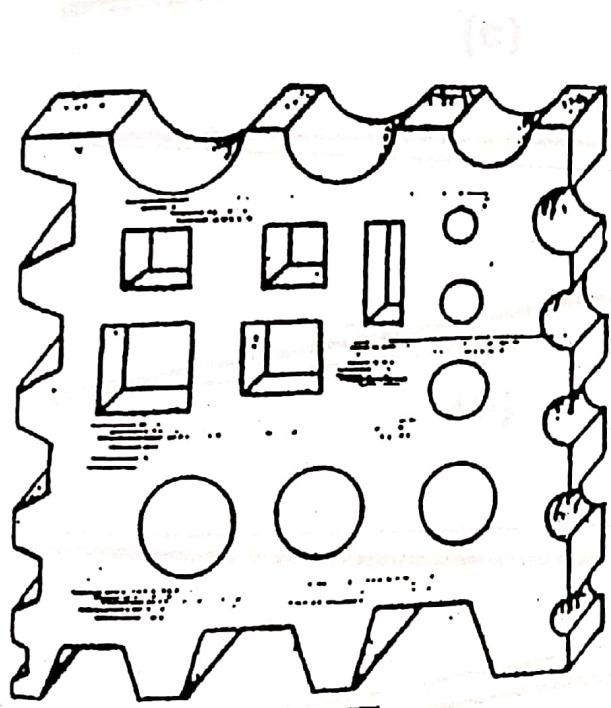


Fig. 42

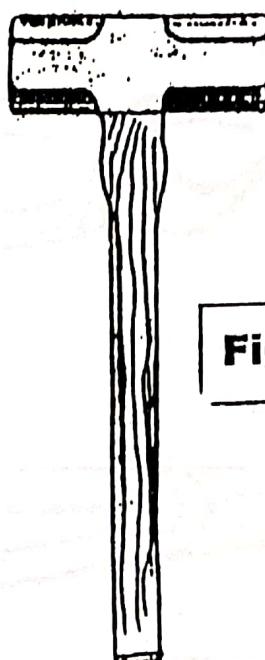


Fig. 43

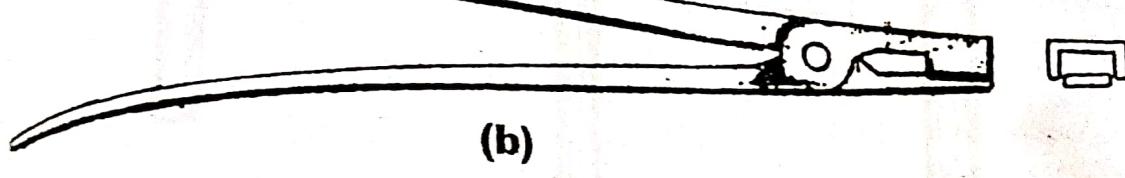
Fig. 41 Anvil

Fig. 42 Swage Block

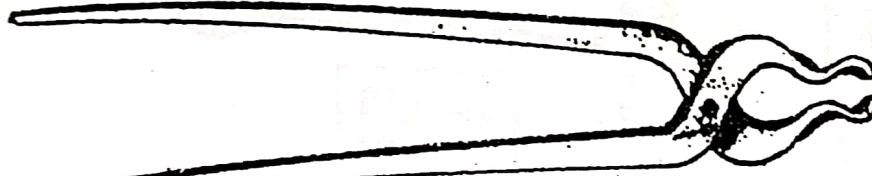
Fig. 43 Sledge Hammer

Fig. 44

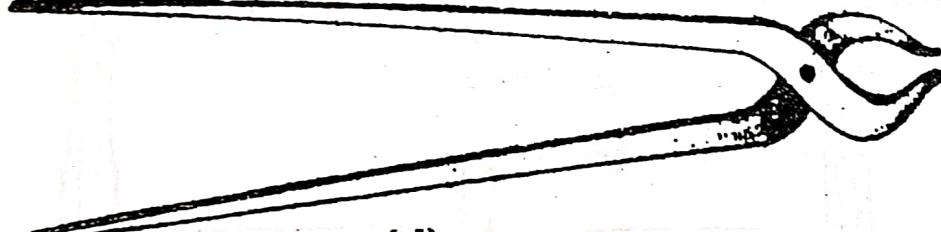
(a)



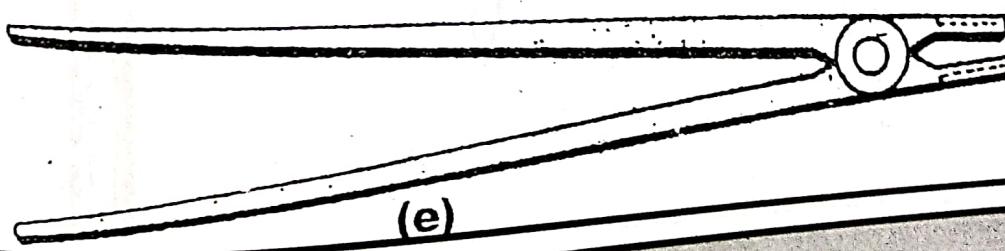
(b)



(c)



(d)



(e)

Fig. 44 Tongs**Fig. (a) Flat tong****Fig. (b) Straight-lip fluted tong****Fig. (c) Rivet ring tong****Fig. (d) Gand tong****Fig. (e) Flat tong**

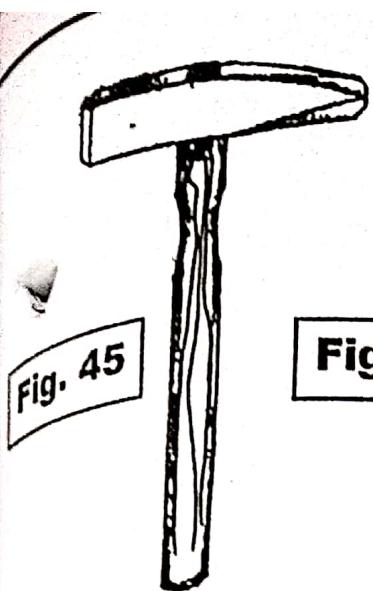


Fig. 45

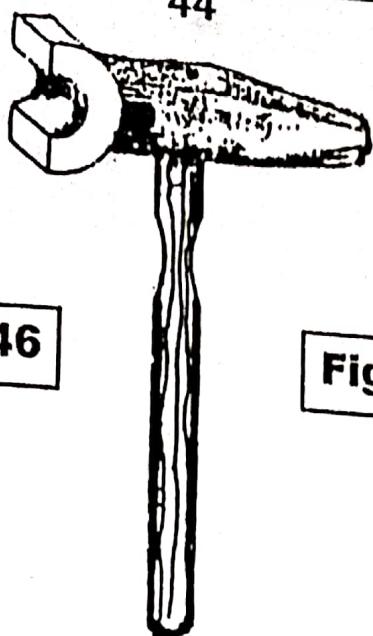


Fig. 46

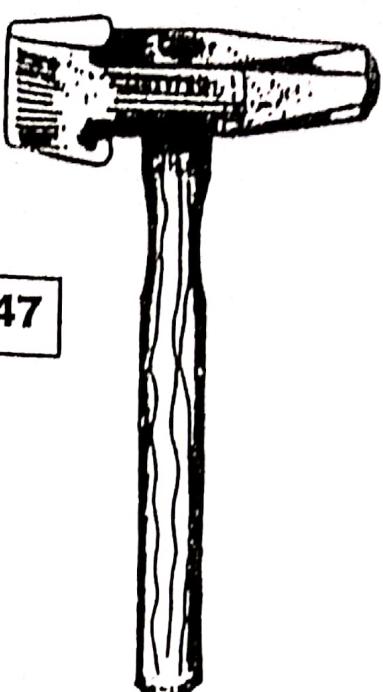


Fig. 47



Fig. 49

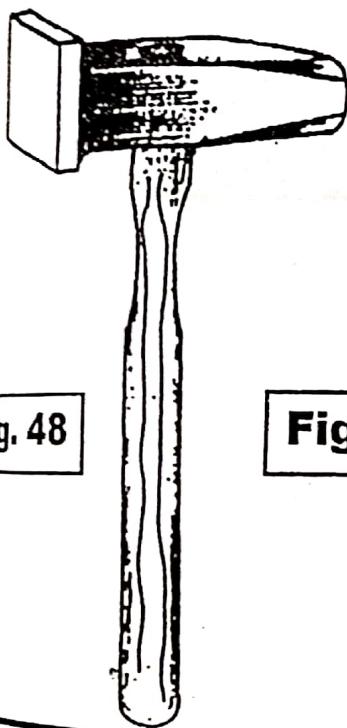


Fig. 48

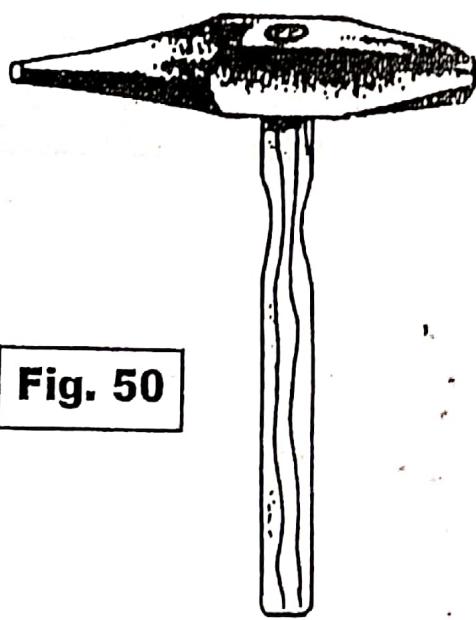


Fig. 50



Fig. 51

Fig. 45 Hot Chisel

Fig. 46 Swage

Fig. 47 Fuller

Fig. 48 Flatter

Fig. 49 Set Punch

Fig. 50 Punch

Fig. 51 Drift

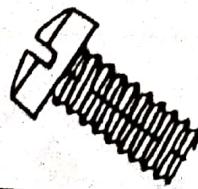
Sr. No.	Description / Part name	Use
1.	Plug	It has external threads and is used with a cross to close the opening of a pipe.
2.	Reducer Elbow type	It is used to connect two pipes of different diameter.
3.	Nipple of Coupler	It is a small length pipe having outside threads at the end. It is used to get extra length of the pipe.
4.	Full way Coupler	The valve is used to ON/OFF flow of fluids.
5.	T-Joint	It is used to connect a branch pipe at right angles to the main pipe line. The tee may be of equal size or of reducing size.
6.	Union	It is used to connect two pipes and can be disconnected easily when required.
7.	Elbow	It is used to connect pipes at right angles. The elbow may be of equal size or of reducing size.
8.	Half turn Valve	The opening or closing of valves on instruments like the trumpet.
9.	Four way Joint	It joins the pipe in four directions.

Sr. No.	Description / Part name	Use
10.	Four Way Elbow	It join the pipe in four direction but one of the line right angle to the remaining line
11.	Three Way Elbow	It join the pipe in three directions but one of them is right angle to the remaining line.
12.	Hexagonal Plug	It is used to close line. The head of the plug is hexagonal.
13.	Flow Cloc	To get delivery of fluid.
14.	Coupler (Coupling)	Two pipe lines of equal diameter and in axial alignment can be joined by a coupler (Coupling). It is a short sleeve with internal thread.
15.	Pipe Vice	The pipe vice is most common tool for holding work. The pipe vice is used for holding round section metal, tubes, pipes etc.
16.	Pipe Spanner	Pipe spanner is used to tighten or loosen nut, bolt, screws, or pipe plugs, etc.
17.	Die and Stock	Dies are used to cut threads on a round bar of metal. Solid and adjustable dies are commonly used. A circular adjustable split die is also used for threading.

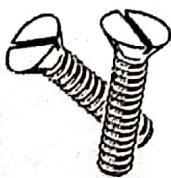
Sr. No.	Part Name
1.	Aluminium plate 8mm
2.	Aluminium block big
3.	Aluminium block small
4.	Stud
5.	Aluminium pulley (square groove)
6.	Grub bolt
7.	Spur gear 2 nos
8.	Round head cap bolt (screws)

Part Name

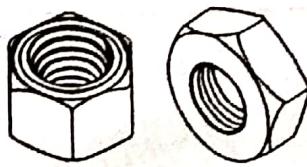
9. Binding (pan head)



10. Counter sunk screw



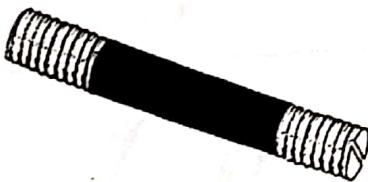
11. Hexagon nut



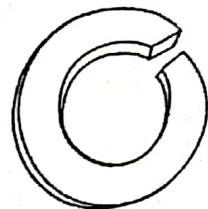
12. Wing nut



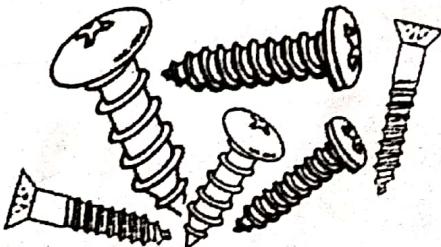
13. Long stud (aluminium)



14. Lock washer



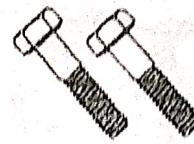
15. Philips head screw



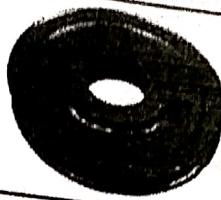
Sr.
No.

Part Name

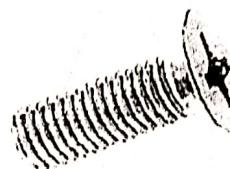
16. Hexagon with washer bolt



17. Hex joint washer pulley



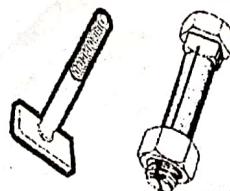
18. Counter sunk Allen bolt (cap bolt)



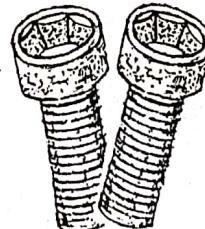
19. Aluminium flat long & short (screws)



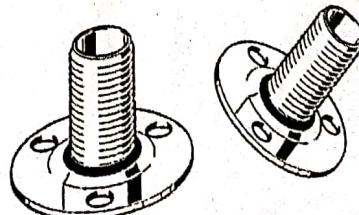
20. "T" bolt



21. Round bolt cap bolt (Allen bolt)



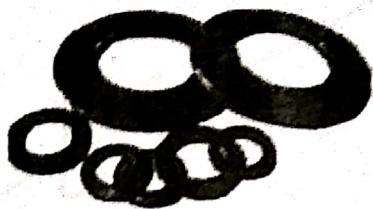
22. Aluminium adaptor



Part Name

Sr.
No.
23.

Aluminium washer



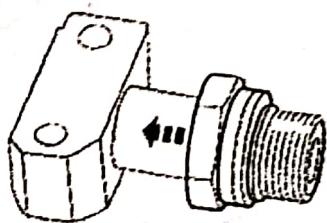
24.

Bush straight



25.

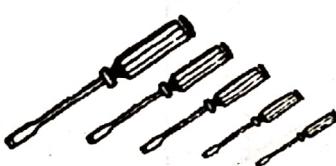
"T" bolt adaptor



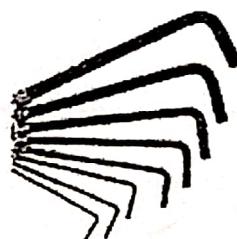
26. Tool Kit (1) Double Ended Spanner Set



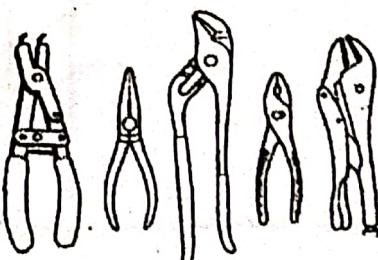
(2) Screw Driver Set

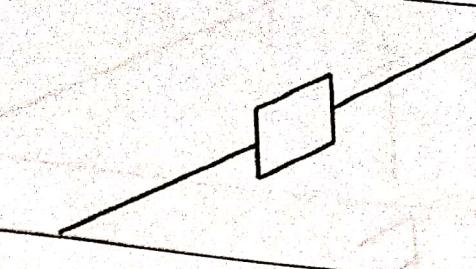
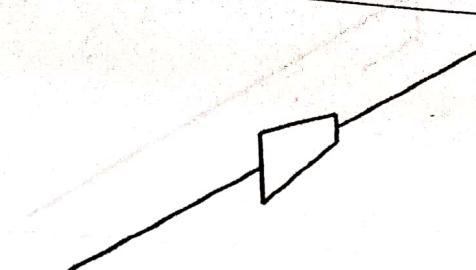
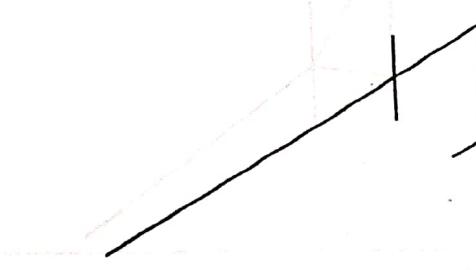
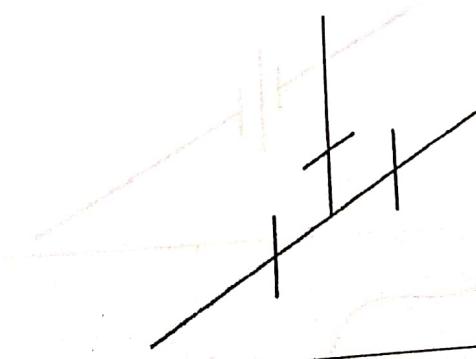
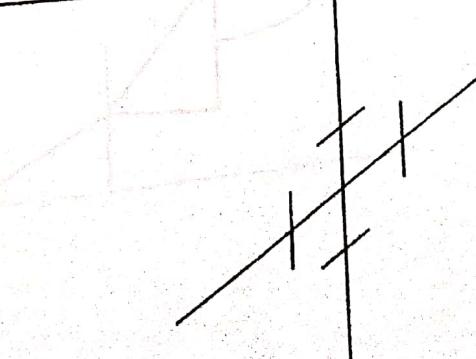


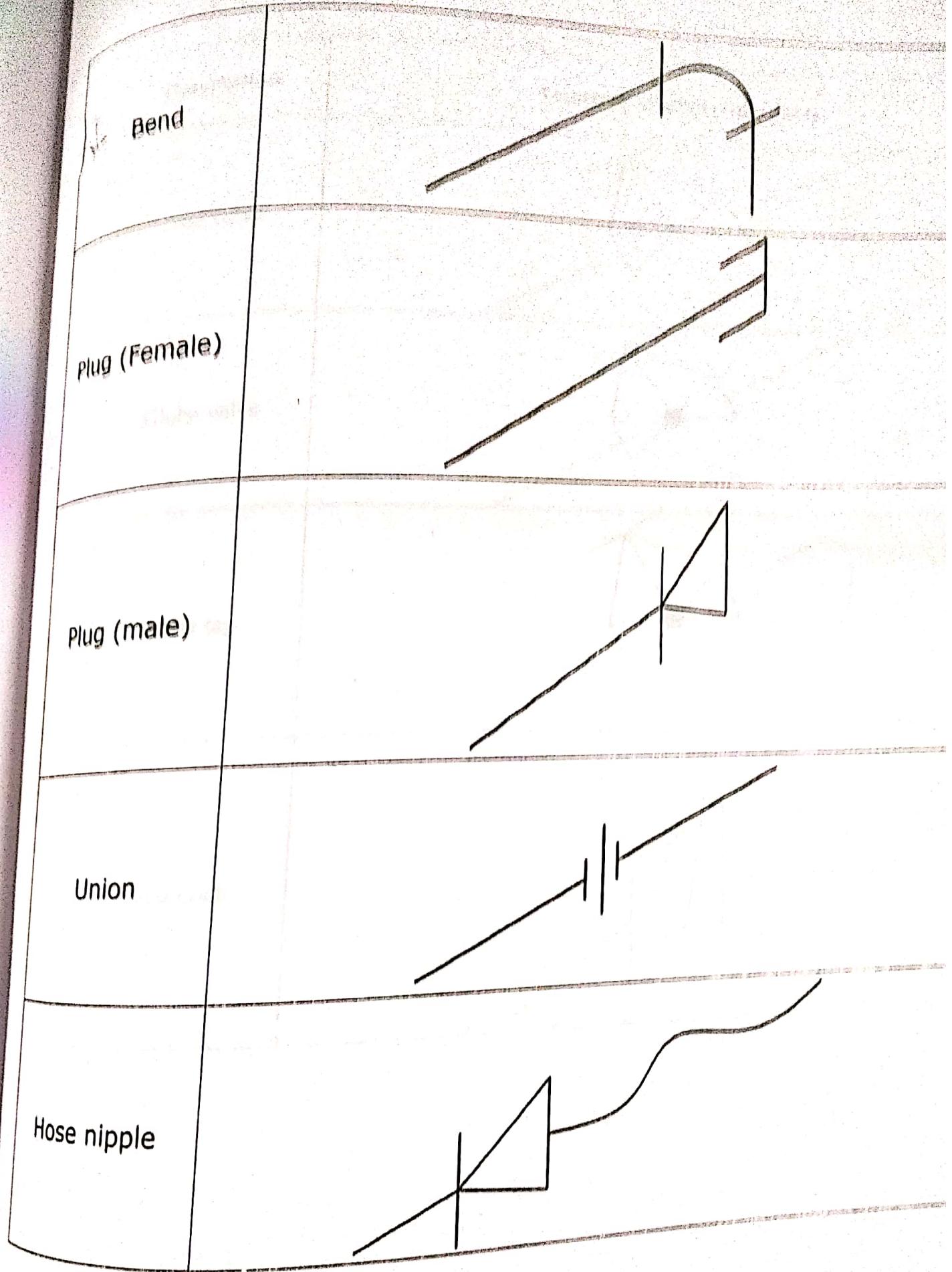
(3) Allen key Set

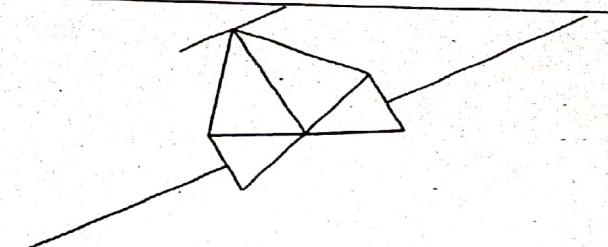
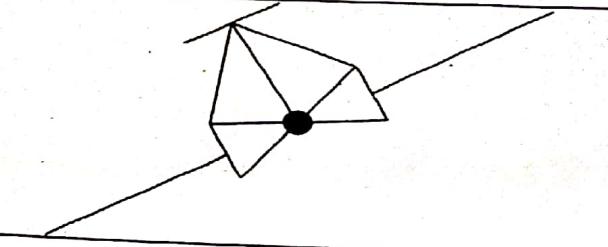
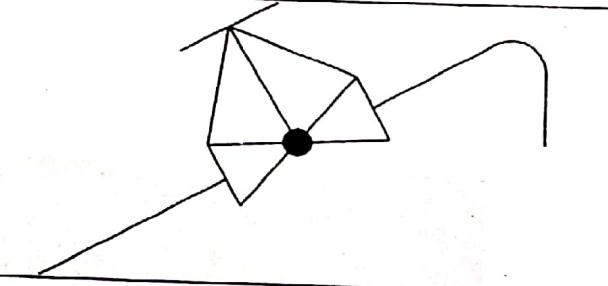


(4) Grip Plier



Description	Isometric symbol (right face)
Coupler	
Reducer coupler	
90° Elbow	
Tee	
Cross	



Description	Isometric symbol (right face)
Gate valve	
Globe valve	
Water tap	
Water cock	