figure: folding foot rule

figure: Try square

SPRING DIVIDER:

Spring divider is a marking and measuring instrument

Application: It is used in the work of circling.

MARKING GAUGE:

It is a marking tools. It can mark correctly on the length of the cutting wood.

Application: It is used in definite marking in wood.

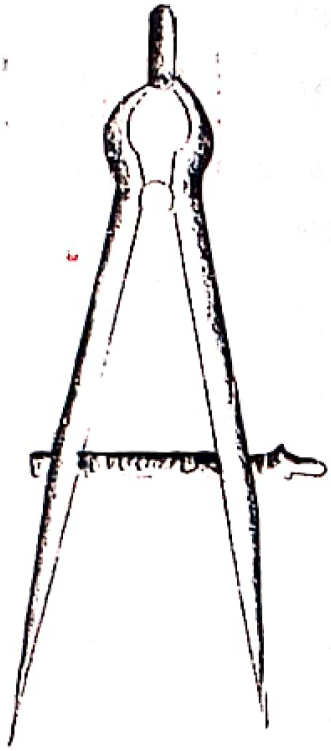

figure: Spring Divider

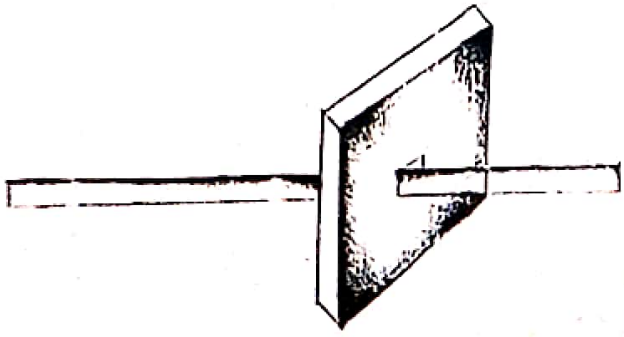

figure: Marking gauge

FOLDING FOOTRULE :

It is a measuring tool. Some scales have scaling in inches at two sides and new folding footrule have one sided scaling in inch and another side in cm.

Application: It is mainly used for measuring length, height, and width.

TRY SQUARE:

It is a checking tool. It finds out angle inside and outside.

Application: It is used for measuring angle straightly and correctly.

figure: 1" chisel

figure: 3/4" chisel

1" CHISEL:

It is a single point cutting tools. It is very useful in cutting wood.

Application:

It is used for both deeping wood and making hole.

3/4" CHISEL:

It is very important cutting tool. It is also a single point cutting tools.

Application It is used for deeping wood and making hole.

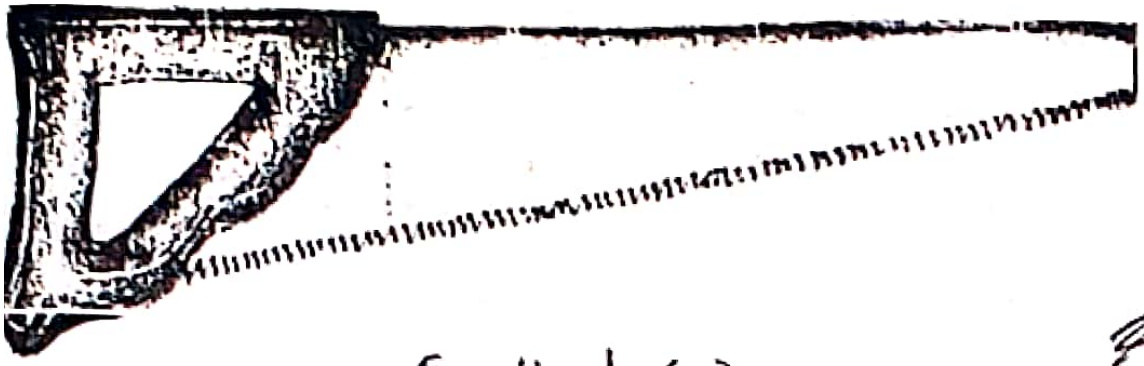

Fig: Hand saw

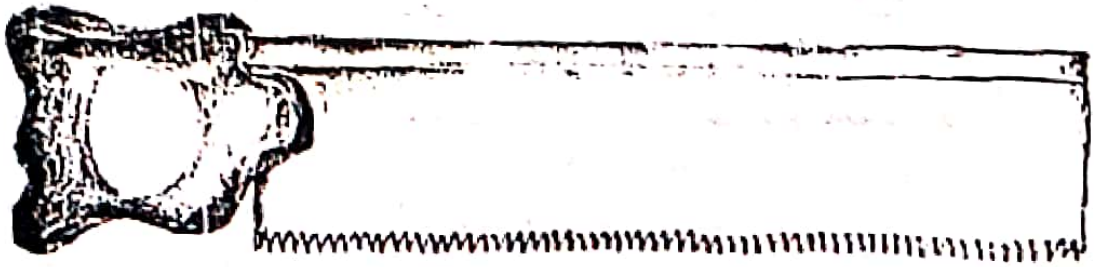

Fig: Tenon saw.

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Hand saw:

It is a multipoint cutting tool. Generally its teeths are made in respect to inch or cm. It is also known as Rip saw.

Application:

It is used for sawing wood and cutting wood correctly to the length.

Tenon saw:

It is also known as Back saw. It is a multipoint cutting tools. Its teeth are thean.

Application:

It is wed for sawing wood. It can perform cutting in front direction and in behind direction.

fig: Int file

figure: Pop file

FLAT FILE:

It is a multipoint cutting tool. Its cutting efficiency is less than Rasp file.

Application:

It is used for precisely shaping the cutting area.

RASP FILE:

It is a multipoint cutting tool. Cutting efficiency is more than flat file.

Application:

It is used for smoothing and precisely shaping different cutting holes of the wood

figure: Mallet

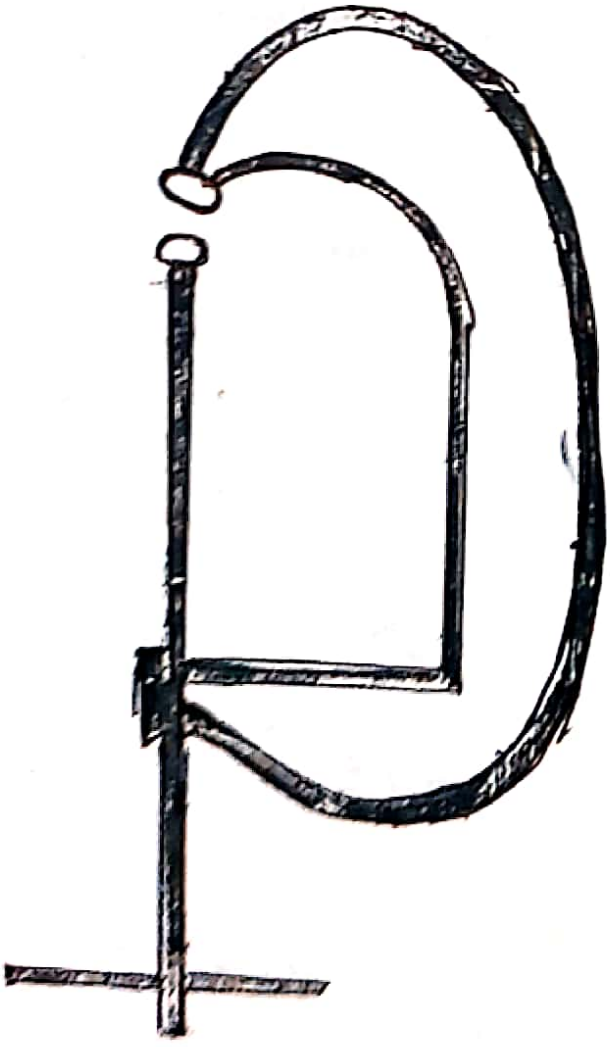


figure: C clamp

Mallet:

It is generally known as wooden hammer. It can perform cutting operations.

Application: It is used with chisel for cutting wood.

C - Clamp:

It is a holding tool. It can hold the cutting wood so strongly that it doesn't move on the table.

Application It is used in lieu of vice

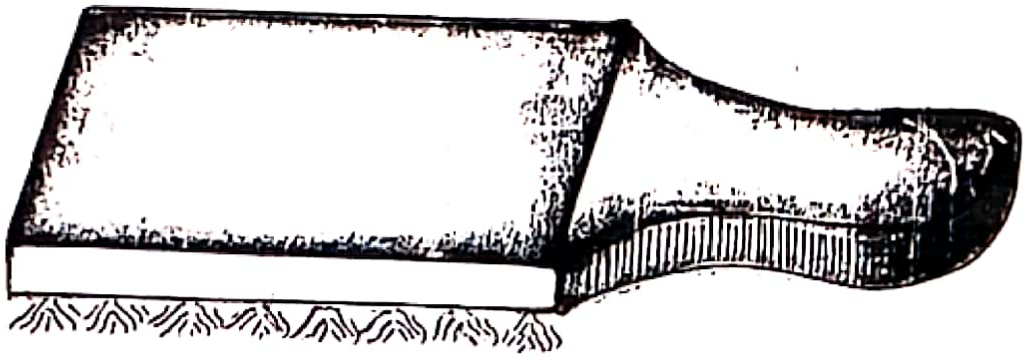


figure: Table Brush

figure: $\frac{1}{4}$" chisel

Table Brush:

It is a cleaning instrument. It is useful in cleaning table and furniture.

Application:

Table brush is used for dust cleaning.

1/4" CHISEL:

It is a single point cutting tool. It is a very useful tool in wood design work

Application:

It is used for mainly chiping wood.

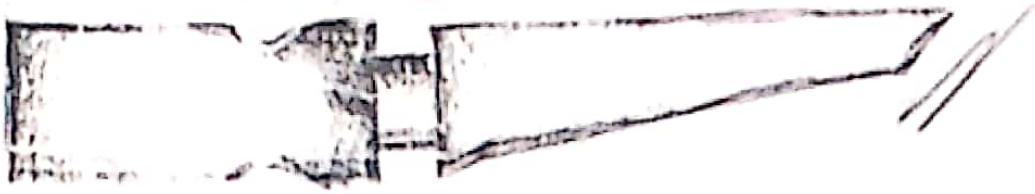


figure: Mortise

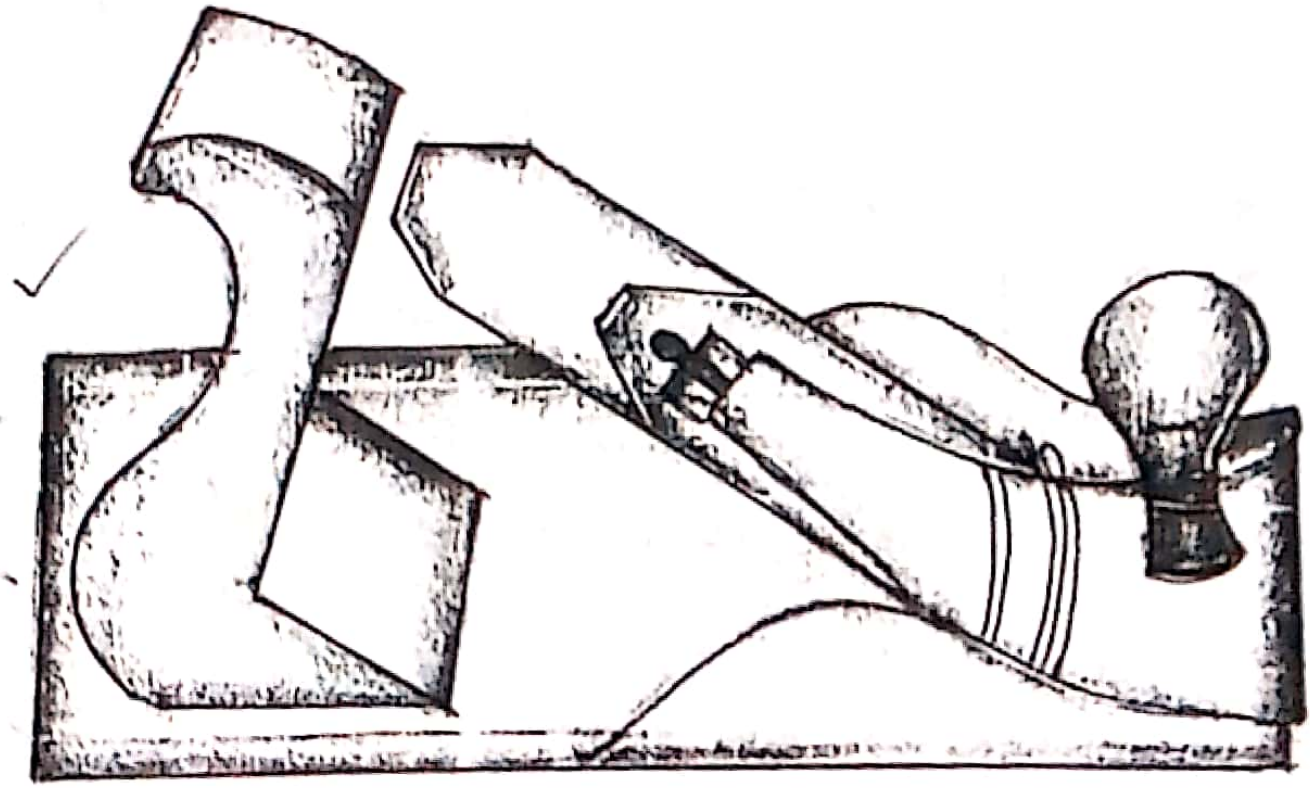


figure: Jack Plane

Mortise:

It is a single point cutting tools. It is useful in deeping woods.

Application:

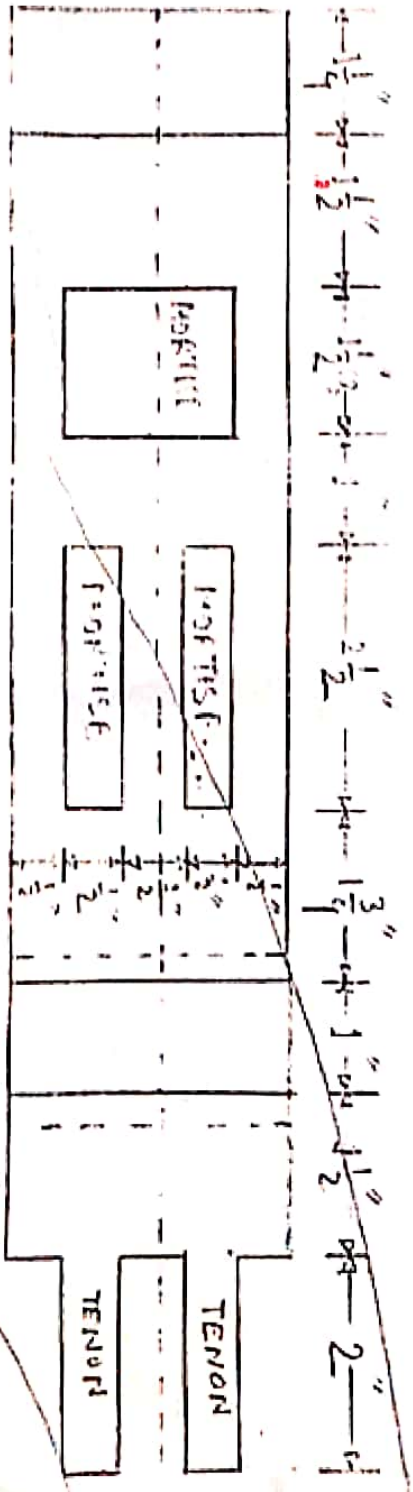
It is mainly used in operation of wood design.

Jack Planner:

It is made of body, handle, knob, frog, lateral adjustment, screw, linercap, cutter iron, cutter iron cap.

Application:

It is used for making rough cutting wood to a solid one. It is mainly used for planing wood.



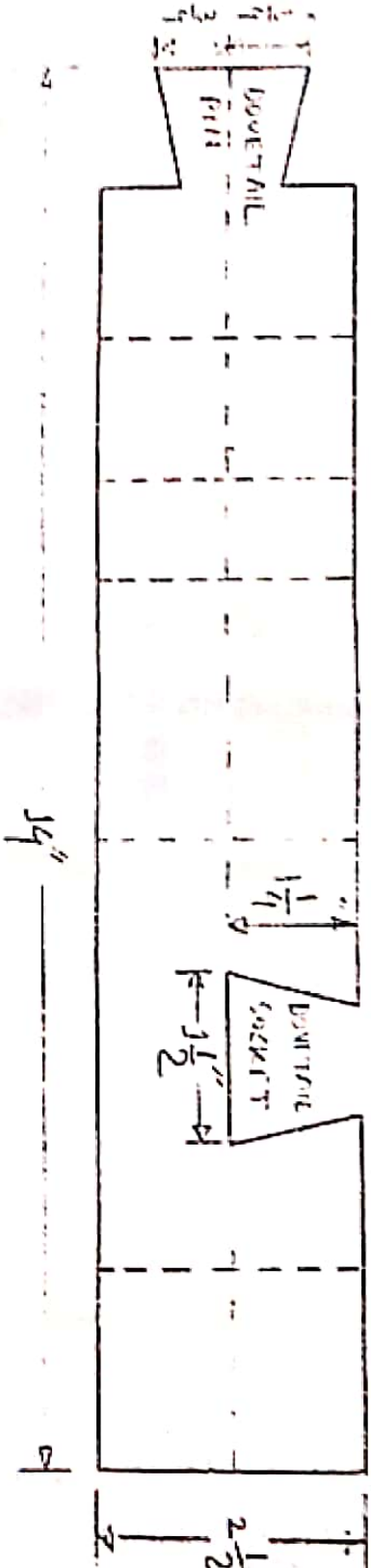


Fig: SAWING, PLANING, CHISELING, MORTISING, TENONING, DOVETAIL PIN & SOCKET MAKING

Name of the experiment

SAWING, PLANNING, CHISELING, MORTISING, TENONING, DOVE-TAILPIN AND SOCKET MAKING

Objectives:

With the help of the required apparatus the given wood piece was to be designed. To perform the operation of operation of socket making and mortising chisels and mallet were required and tenoning operation was to be performed by using hand saw. Jack planner was to be used for planning and rasp file was needed to make the wood piece smooth

Required Apparatus:

1. Folding footrule
2. Try square
3. Jack Planner
4. Hand Saw
5. Tenon Saw
6. 1" chisel
7. $\frac{3}{4}$" chisel

8. $\frac{1}{4}$ chisel
9. C- clamp
10. Flat- flat
11. Mallet
12. Table Brush

Rationale :

Wood designation should be performed perfectly there in Bangladesh carpentary work is considered to be a well known source of earning foreign currency. A lot of people is related to the profession of wood designing for their livelihood. But in every sector these operations of sawing SAWING, MORTISING, TENONING, SOCKET-MAKING etc have to be performed correctly to have the demand of carpentary work.

Introduction :

The whole work is consisted of some operations. Here some specific instruments are used in each of these operations. Socket-making and mortising operations are performed with the help of chisels where as sawing is done by using saw. Folding foot rule,

try square and rasp file are much needed instrument to finish the work correctly and perfectly.

Procedure:

(1) Firstly a wood piece of 14" length was taken which width was 2½".

(2) Then pen was used correctly for marking foursides of the wood piece. After planning all the surfaces 1", ¾" and ¼" chisels, hand saw, mallet, folding foctrule and try square were used to do the mortising.

(3) Next tenoning operation was done with the help of hand saw.

(4) Finally hand saw, flat-file, chisel, rasp file were used for dovetail pin, socket-making and finishing all sockets and mortise.

Application :

The performed operations are considered the principle of wood designation. Most of the furnitures are made of using these operations. The shape of door, window, wooden base are considered the output of these operations. So these operations are required as crying need in carpentary works and wood designation.

Precautions:

1. Every operation was performed carefully with full attention.
2. The wooden piece was attached tightly with the help of vise and C-clamp.
3. While mortising, chisel was used very carefully.
4. Mortising and socket making were done with patience and carefulness.
5. After the completion of the job, the job table was cleaned by using table brush.
6. An apron was putted on to keep our clothes clean from crashed wood pieces
7. Goggles were used to keep the eyes safe from wood pieces.

Discussions:

The total job was considered of sawing, planning, mortising, tenoning, dovetail pin and socket making. Every operation was performed practically following the rules and regulations. Planning and mortising operation was done superbly. But the dovetail pin was appeared to be difficult. Then tenoning operation was done up to the mark. Finally the output of the operations were considered to be perfect.

Conclusion:

Wood designation is meant to figure out that a lot of hard work to be done.. All the operations are considered risky and needed much attention. But performing all the operations the wood piece was appeared to be as a surprise. The solid wood piece was turned to a designed one.