

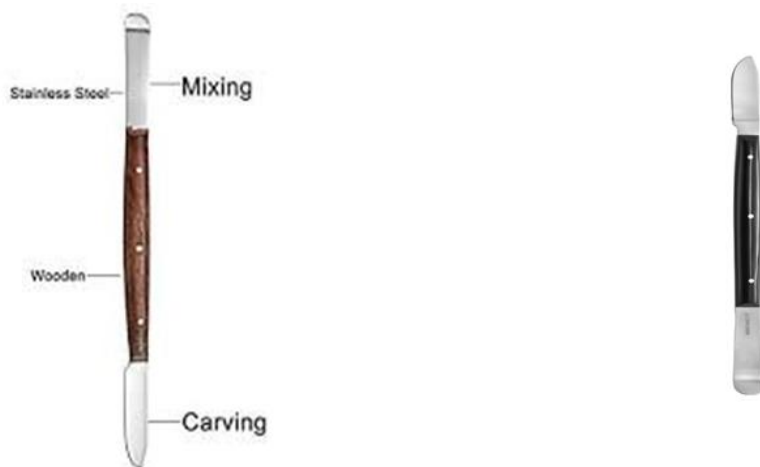
Types of hand instrument

1. Cutting Hand Instruments
2. Carving hand instrument
3. Mixing hand instrument

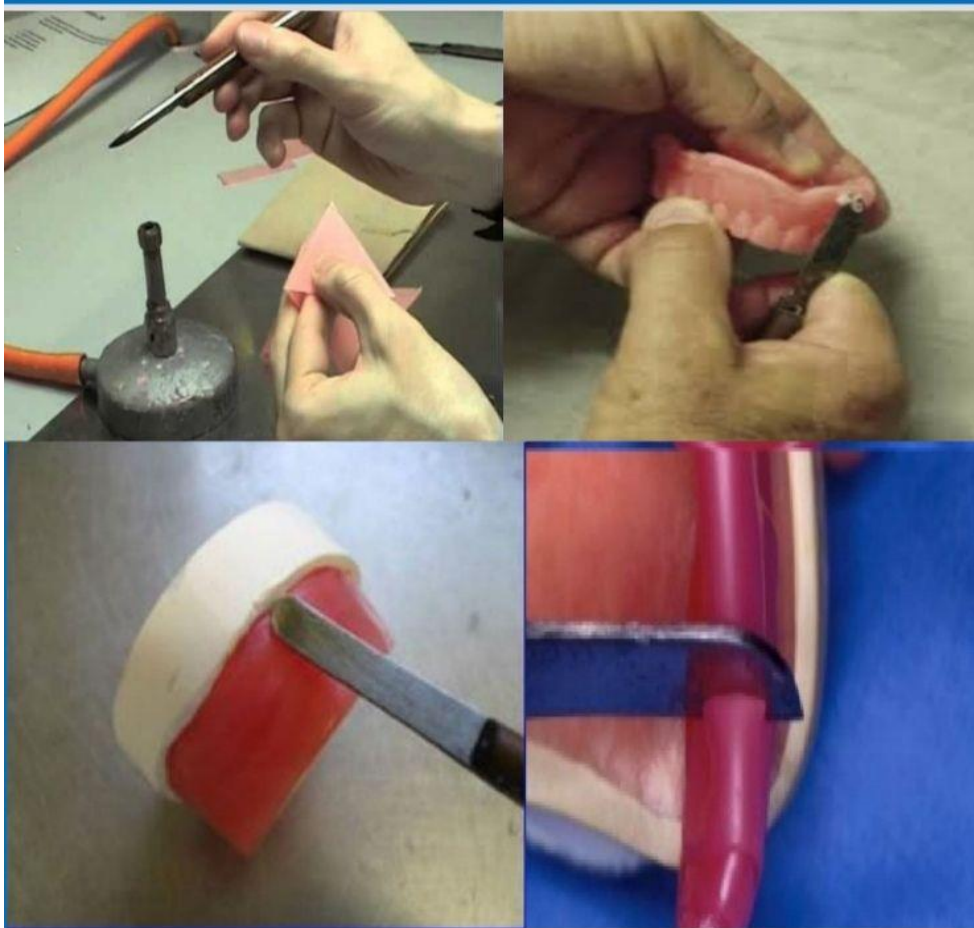
• Types of the Cutting Hand Instruments: -

- 1) Wax knife.
- 2) Plaster knife.
- 4) Scissors.
- 5) Wire cutter or pliers.
- 1) Wax knife: -

It is a hand instrument used mostly in a dental lab and used in work with wax, not used for cutting gypsum products. This hand instrument is made from stainless steel and has two ends and a wood handle, one end is sharp like a small knife and another end like a spoon (plate).



The sharp end is used to cut wax and other working & shaping with wax, another end "like spoon end" is used to push melted wax. The handle must be made from wood so that separate heat.



Don't heat the knife to a redness degree, this procedure makes a change in the properties of the metal and makes it soft, also it leaves some carbon position. In special cases that need to be heated the knife, the degree should not be exceeded 50°C.

2) Plaster knife: -

This instrument used for gypsum products (plaster and stone) work ex: cut excess gypsum products. There are many types of this knife, the used type have a sharp metal end "stainless steel" with one side or two sides and there is a plastic or wood handle between them, also in some type have a metal end for opening metallic flasks.



3) Manual and electrical saw : these used for gypsum product cutting and has two types

1. Conventional manual saw: It used for cutting gypsum product and it comes indifferent sizes the normal saw used in the acrylic lab for cutting the plaster that enclosed the denture in deflasking and mini-manual saw which used in crown and bridge lab for cutting the dies of prepared teeth .



2- Electrical saw : used in crown and bridge lab for more accurate and quicker cutting of the die especially when we have multiple dies of prepared teeth .



4-Scissors:- Many types of scissors are classified into:

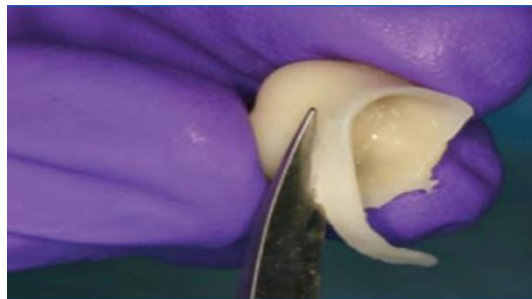
1. Straight head scissor: It made from stainless steel this type of scissors used in:

- a. Crown & bridge.
- b. Chrome cobalt.
- c. Asbestos paper. (also used in special papers within rings casting)
- d. Shellac base plate



2. Curved head scissor:

This is scissor has a curved end, sometimes called crown scissors.



3. Plaster scissors:

Is used for cutting gypsum products (stone and plaster), also have spring lever to make the handle always divergent. The cutting end has two shapes either

sickle or like a small saw.



4. Wire cutter plier: -



2- Carving hand instrument :- It is a very important instrument in prosthesis lab used for shaping and making wax skeleton and for working crown & bridge, complete & partial denture. There are many types of wax carver named by people who designed them some of which are :-

- 1- **Lecron carver**. is made from stainless steel and has two ends, one end is sharp fine knife and another end like a small spoon .The sharp end is used for carving & shaping with wax, another end "like small spoon end" is used to fine

carving wax. They are used in complete & partial dentures and crown & bridge lab



2. Hylin carver.

3. Bealle carver.

4. Roach carver.

5. Zahi carver.



3-Mixing Hand Instruments :- Classified into: -

- 1. Wax mixers.**
- 2. Cement mixers.**
- 3. Acrylic mixers.**
- 4. Plaster mixers**

1. Wax mixers:- Instruments used for mixing melted wax that needed incomplete and partial denture .There are two types of wax carver :

a. Gritman wax spatula: this spatula is made from stainless steel and the shape of it is like a flat arrow with a handle. One end is large, and another end curved. The length of these instruments is 15-20cm.



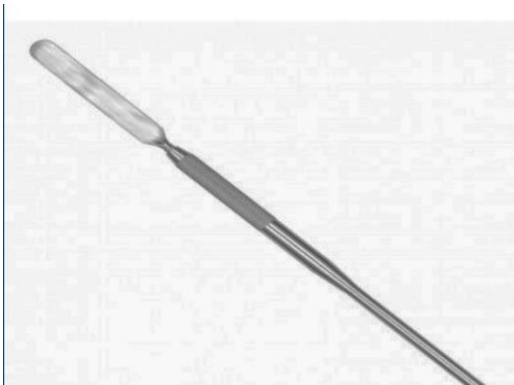
b. Beal wax spatula: - this spatula is made from stainless steel, it is smallest than the Gritman wax spatula and have 2 ends one is curved, the other is straight and flat.



2-Cement mixers: -Cement spatula: are used to mix and load the cement and other material into the crown also used to load impression material in impression tray .There made from stainless steel material with two end one is pointed and other is with round or flat end . When mixing cement a glass slab which made from glass, the thickness is 1cm, and have a rectangular shape of different size .On which powder and liquid b are mixed by cement spatula



2. **Acrylic mixers:** - made from stainless steel with one flat end used for mixing heat cure and cold cure acrylic the mixing of acrylic should made in acrylic container (mixing jar)



4. **Plaster mixers:** - it contains from

1) Plaster spatula is made from hard plastic or stainless steel with plastic or wood handle, with one ends either the straight or curved end. The straight end is used for mixing impression materials while the curved end is used for mixing gypsum products. The plaster spatula needs a container called rubber bowl comes in different size .

