

Dental Burner uses in Prosthodontics Dentistry

Dental burner :- it is a source of heat (flame) which need in dental laboratory mainly in wax work .There are different types of burner use in prosthodontics dentistry and they divided into:

1. Alcohol burner (spirit lamp):-

It has a small container with small cover have a hole and there is cord "made from cotton "pass through the hole and entering inside the container the other end project outside the cover, also contain cover that covers flame side to avoid evaporation of alcohol in the case when it not uses, fill the container with alcohol this lead to saturating the cotton cord when burning it. It can be made from glass ,stainless steel or aluminum .

The requirement of flam of this type of burner-it must be blue color flame to get the required heating degree if the flame is blue with redness this is because the alcohol that uses not pure & should not use.



2. Air-Alcohol burner (Air alcohol torch) :-

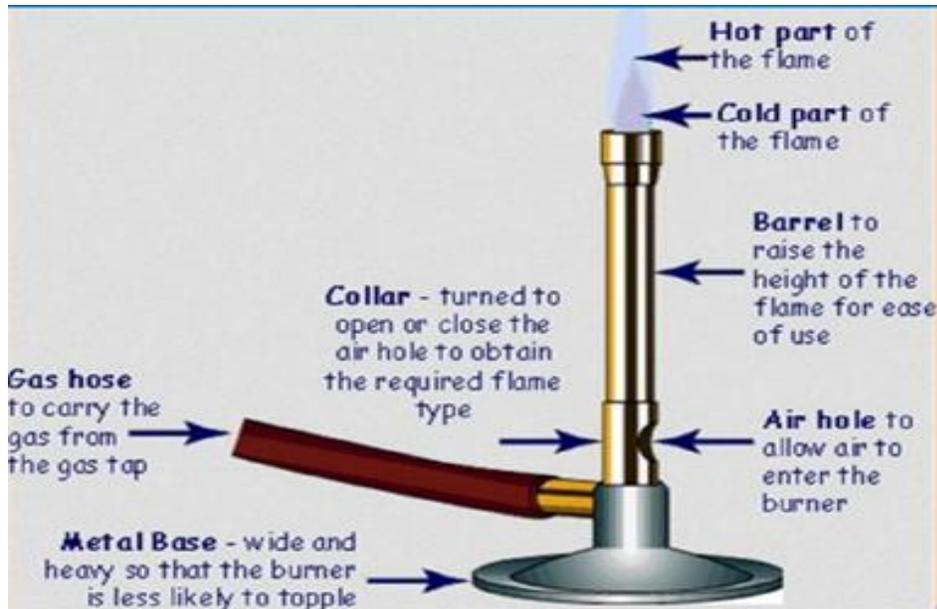
It's like the alcohol burner but it added to it another part that gives air applied to the flame of burner this lead to change its way and convert it to long stable flame, in this way we can control the flam direction and applied it to the wanted area with an increase in heating degree.



3. Table gas burner (Bunsen burner):

It consists of a cylinder tube stable on the base that connects to the gas source and it is a hole in the lower of the connection that controls air entering that help for gas burning. We can use Bunsen burner with all types of gases in case of changing the diameter of the gas hole that use because each type of gases wanted a certain diameter of the hole that controls the amount of gas that is going outside.





Maintenance and precautions of using Bunsen burner :-

- 1- clean al wax debris
- 2- burner should be placed on fire proof bench
- 3- frequent inspection of the gas tube is important to make sure that there is no cracks in the gas tube
- 4- the air collar should be closed before turning on the gas

5-Metal melting torch

There are two types of metal melting torch

A- butane gas torch :used in dental lab for the purpose of repair of crown and bridge , chrome cobalt partial denture and for soldering purpose in orthodontic appliance .



B-Acetylene - oxygen melting torch : is used in melting gold and chrome - cobalt alloy used in crown and bridge and partial denture, the torch is either (1)single orifice or (2) multi orifice

The torch consist of a handle and key way and connected to two tubes :-

(1) - red tube is the acetylene tube, (2)- blue or green tube is the oxygen tube



Zones of the blow torch flame used in soldering and melting alloys

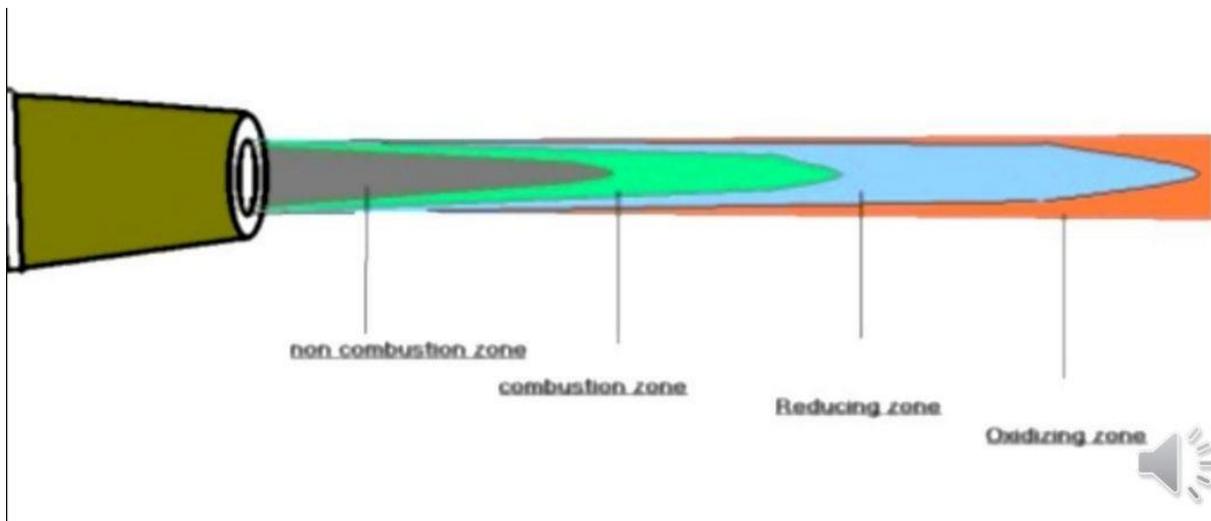
zone 1-colorless zone / non combustion (black) no heat present

zone 2- combustion zone (green) keep away from metal

Zone 3-_reducing zone (blue) hottest part of the flame, used for fusion of casting alloy

Zone 4- oxidation zone (red) cold part of the flame, never used for melting alloys

Proper mixing of oxygen and gas will produce the best flame needed



Dental Pliers :-

It is instrument use for wire bending and adjustment of the wire (i.e. for construction the clasps in removable partial denture and springs in orthodontic appliances.(The parts of the pliers are the handle & the beak.

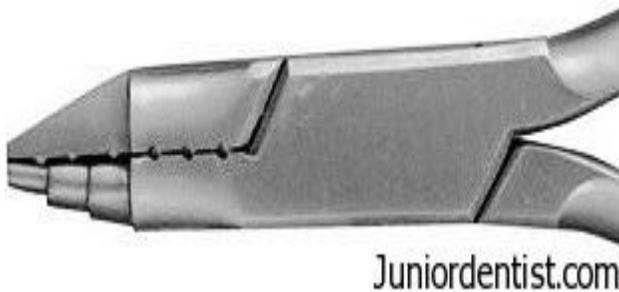
Types of pliers:

There are many types of pliers but they commonly use:

1. Universal pliers: these are used for all wire bending with exception of the formation of the loop the beaks are stout, tapered, and rectangular in section or coils.



2. Loop-forming pliers: these have a round and tapered beak. A round which loops or coil of various sizes may be formed.



3. Hollow- chop pliers: used for making bends in wires, these pliers have one beak round and other hollowed.

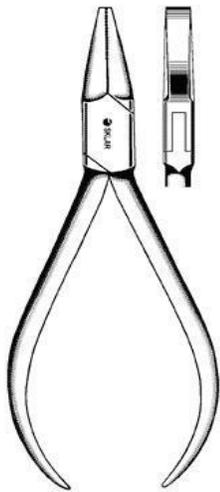


4. Three head pliers: have three head used for the construction of zig-zag in shape



5. Adams pliers: these have two straight and triangular beaks or one straight beak and other rounded beak used for the construction of Adams clasp in the orthodontic, these have two types:

1- Square-ended pliers : used in the bending of orthodontic stainless-steel wire.



2- Square- and round-ended plier: used in the forming of springs and curves in orthodontic wires.

