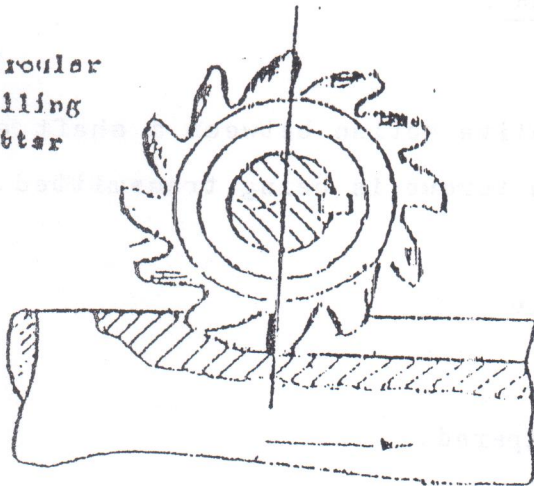


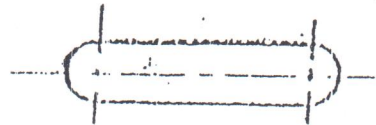
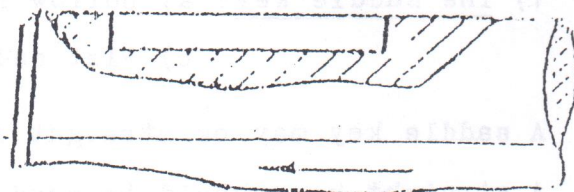
Keys & Pins

Production of a KEY SEAT by milling cutters .

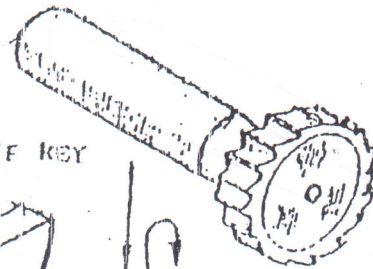
Circular
Milling
Cutter



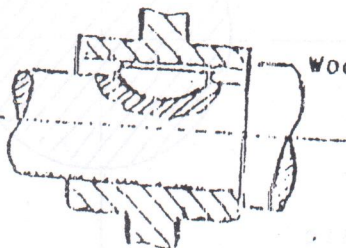
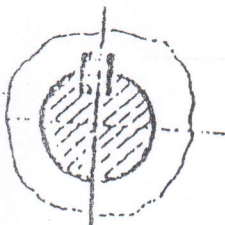
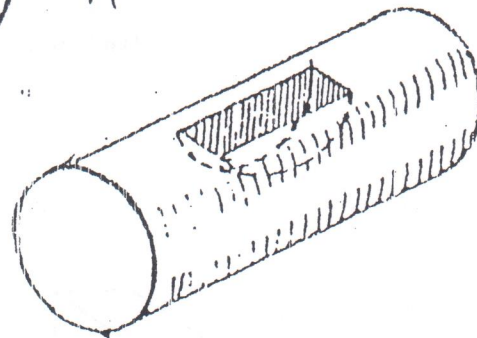
End
MILL
Cutter



WOODRUFF KEY



Breaching a Key way.



Woodruff key cutter and key seat.

Keys and pins

Keys:

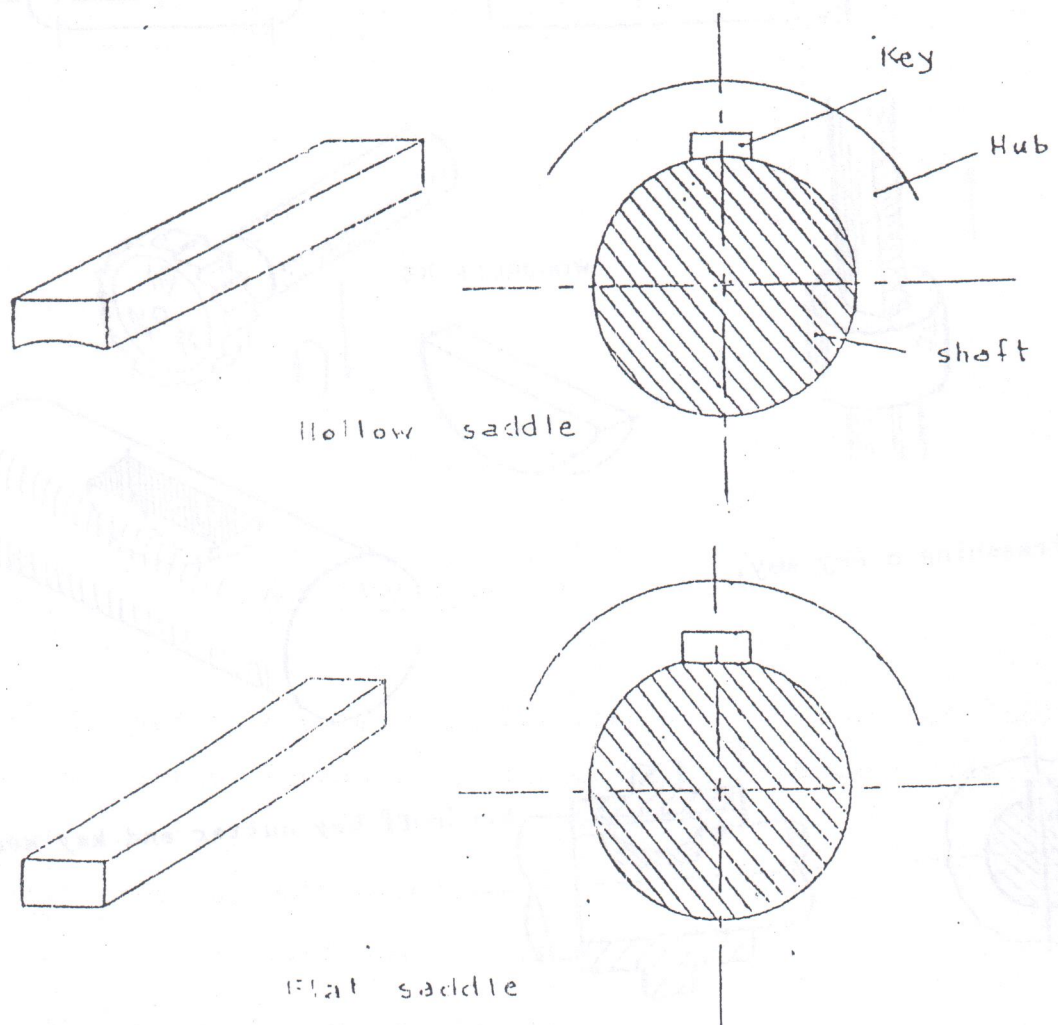
They are used to prevent relative motion between a shaft and the connected member through which torque is being transmitted.

Common types of keys:

- 1) The saddle key:
 - a) Hollow saddle
 - b) Flat saddle

A saddle key may be straight or tapered.

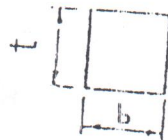
A straight key should be used with a set screw.



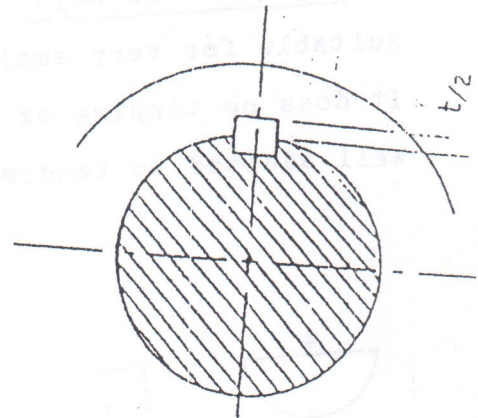
2) The square key:

Is common in general industrial machinery.

May be tapered or straight.

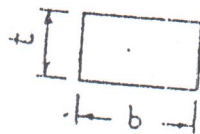


$$b = t$$

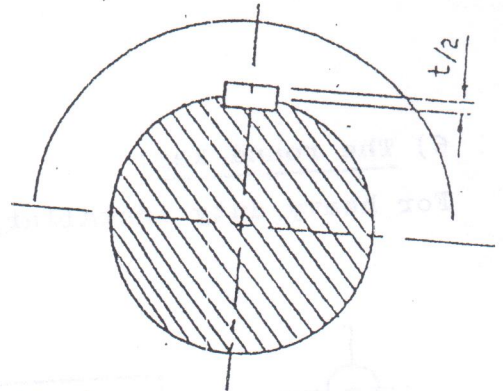


3) The flat key:

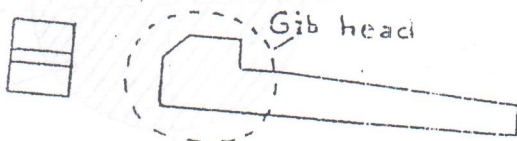
May be tapered or straight.



$$b > t$$



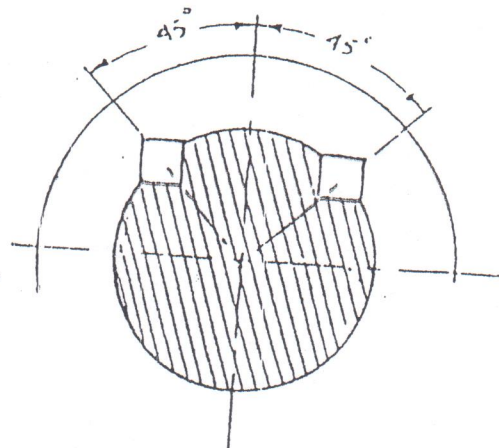
For both square and flat keys if tapered the height is tapered by 1:96
They may have gib heads to facilitate removal.



Taper key

4) The Kennedy key:

For heavy duty installations.

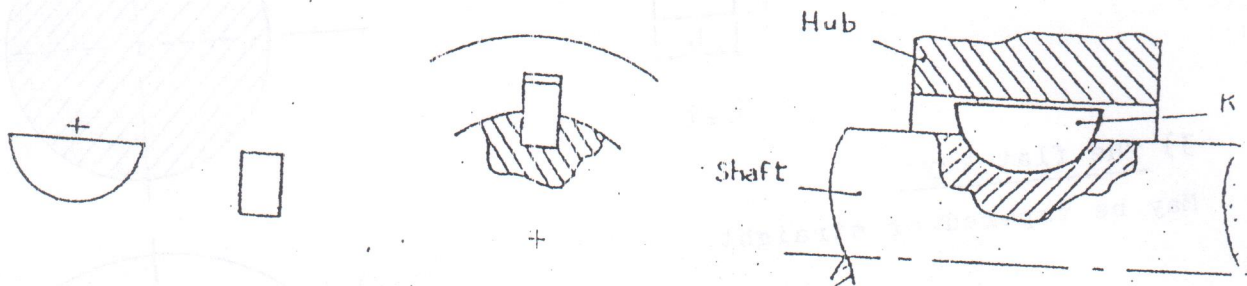


5) The Woodruff key:

Suitable for very small torques to avoid troublesome fitting.

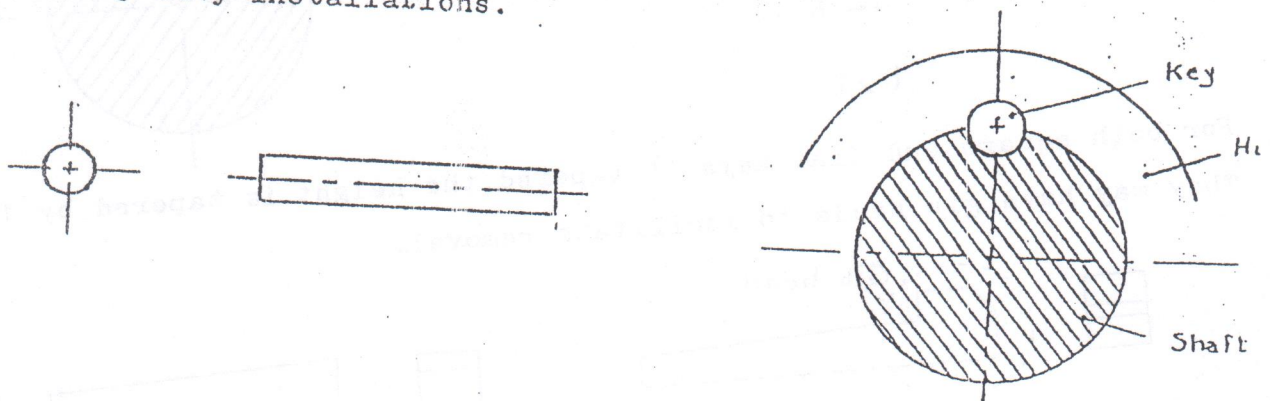
It does no tipping or rolling.

Well adapted to tapered shafts.



6) The round key:

For heavy duty installations.

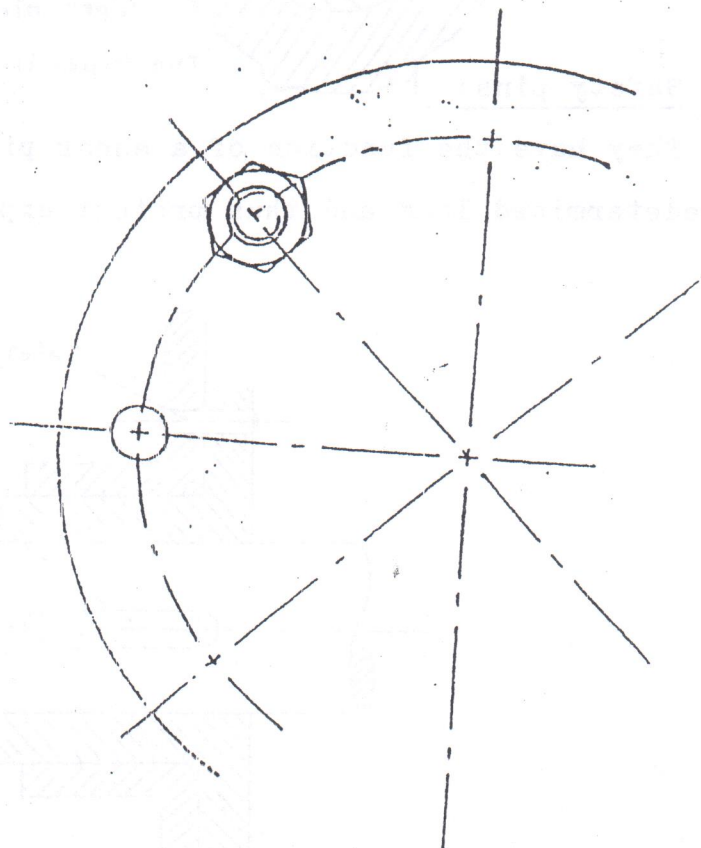
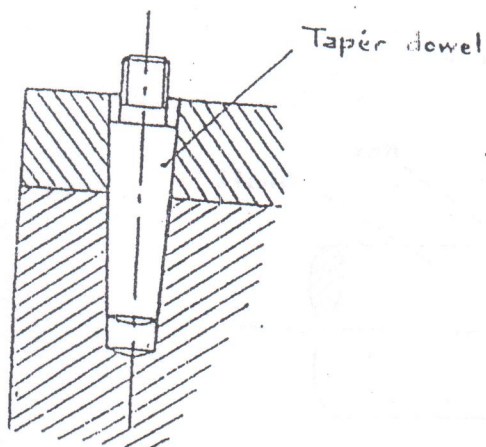
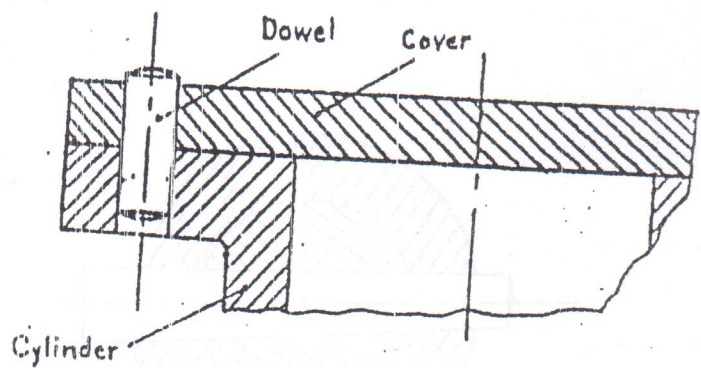
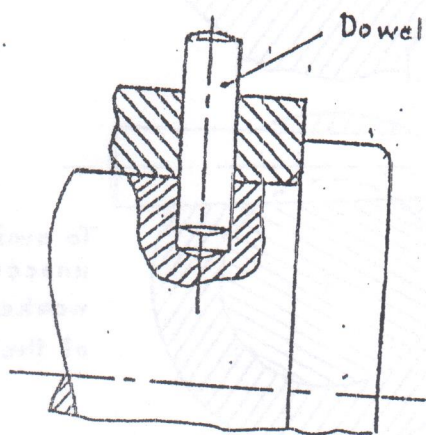


The function of pins may be classified as follows:

1) Locating pins (Dowel pins or Dowels for short):

They fix the relative position of two parts.

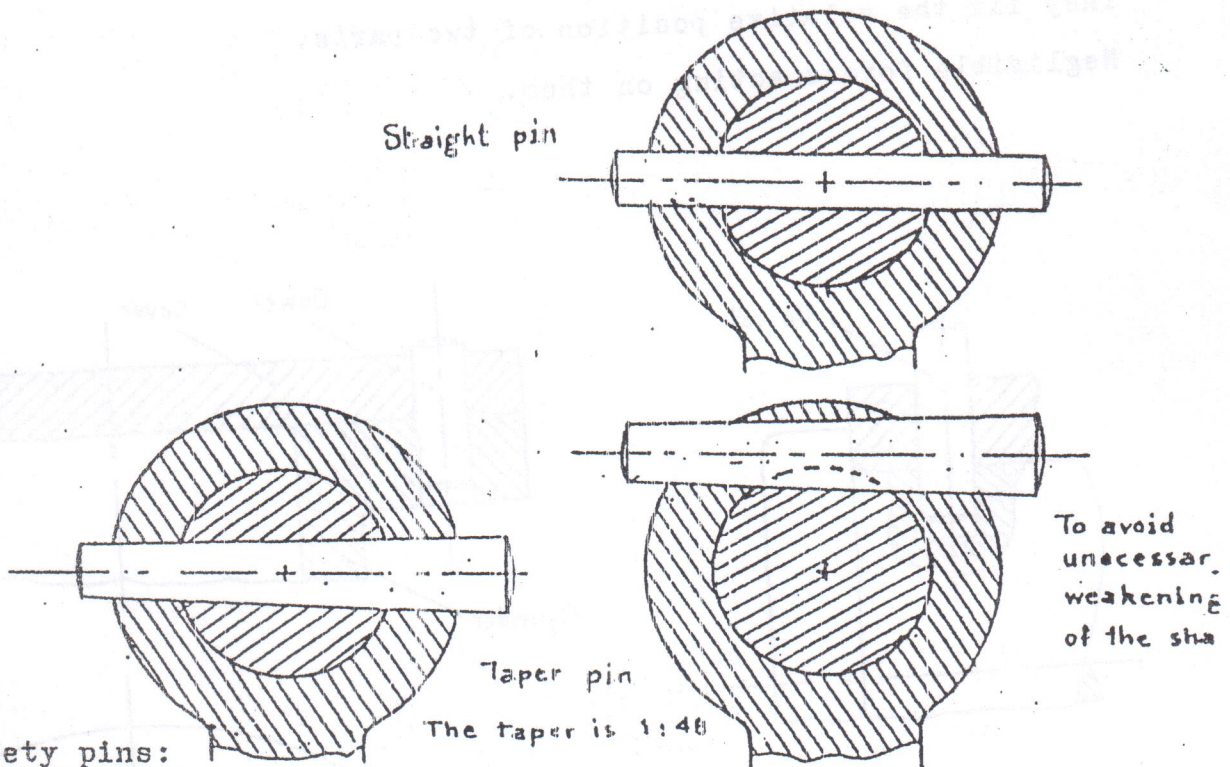
Negligible forces acting on them.



2) Shear pins:

They transmit service loads.

They may be tapered or straight.



3) Safety pins:

They have the function of a shear pin but are designed to fail at a predetermined load and thus protect expensive parts from damage.

