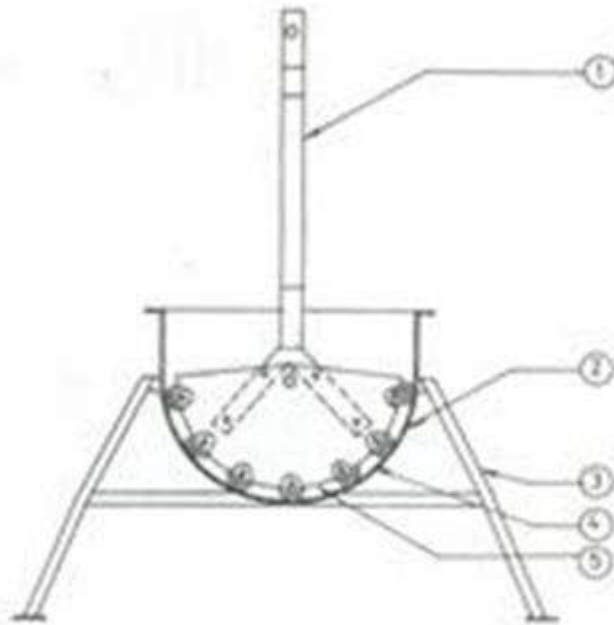


Unit 4 – Topic 3

Groundnut decorticator & Castor Sheller

Groundnut decorticator: Manually operated

Hand operated groundnut decorticator consists of curved 'L' angle frame and four legs. A perforated sieve in a semi circular shape is provided. Seven cast iron peg assemblies are fitted in an oscillating sector. The groundnut pods are shelled between the oscillating sector and the perforated concave sieve. The kernels and husk are collected at the bottom of the unit. The clearance between the concave and oscillating sector is adjustable to decorticate pods of different varieties of groundnut. The sieve is also replaceable according to the variety of groundnut pods.



1. HANDLE
2. CONCAVE SIEVE
3. FRAME
4. SHELLING PAD
5. OSCILATING SECTOR

Fig. Groundnut decorticator: Manually operated
Groundnut decorticator: Power operated

The unit consists of a hopper, double crank lever mechanism, an oscillating sector with sieve bottom and blower assembly, all fixed on a frame. A number of cast iron peg assemblies are fitted on the oscillating sector unit. The groundnut pods are shelled between an oscillating sector and the fixed perforated concave screen. The decorticated shells and kernels fall down through the

perforated concave sieve. The blower helps to separate the kernels from the husk and the kernel are collected through the spout at the bottom. The shells are thrown away from the machine.

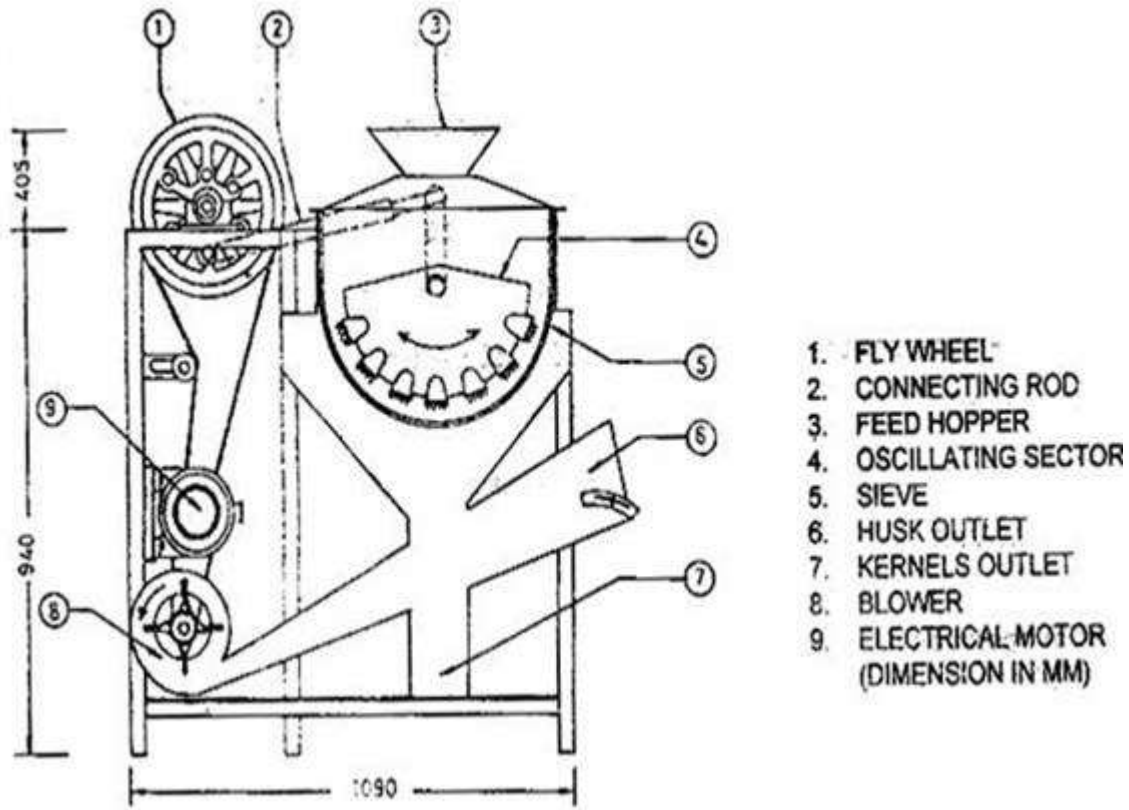


Fig. Groundnut decorticator: Power operated

Castor sheller cum winnower

The machine consists of a teakwood cylinder and concave, a feed hopper, blower, sieve assembly and 2 hp electric motor. Unthreshed pods are retained on the top of sieve and come out from chute at the end of the sieve. Partially and completely shelled one pass through the top sieve. The middle sieve retains the partially shelled pods and allows the shelled beans to pass through. The partially shelled pods come out from chute at the end of middle sieve. The lighter hulls are blown out by the blast of air form the blower. The shelled bean comes out form the chute at the middle of the bottom perforated sheet. The perforations allow sand particles; weed seed etc., to be sieved out of the threshed castor bean. Capacity of the unit is 250 kg/h.

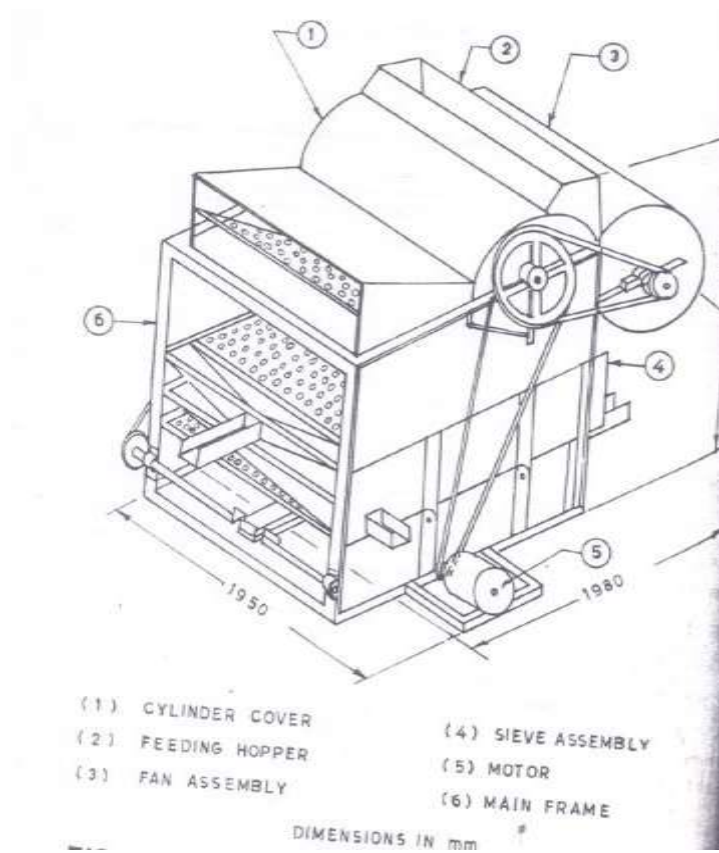


Fig. Castor Sheller cum winnower

Castor Sheller

The sheller consists of a wooden ribbed cylinder of 320 mm length and 380 mm diameter, concave, cylinder cover, feeding chute discharge chute, drive mechanism and crank. The clearance between the concave and cylinder adjustable depending on the size of bean. Shelling drum is operated by crank through a gear unit which shells the castor pods. Manual clearing is done. The unit is operated by two labours. Capacity of the unit is one quintal per day.



SNS COLLEGE OF TECHNOLOGY
(An Autonomous Institution)
Coimbatore – 641035.

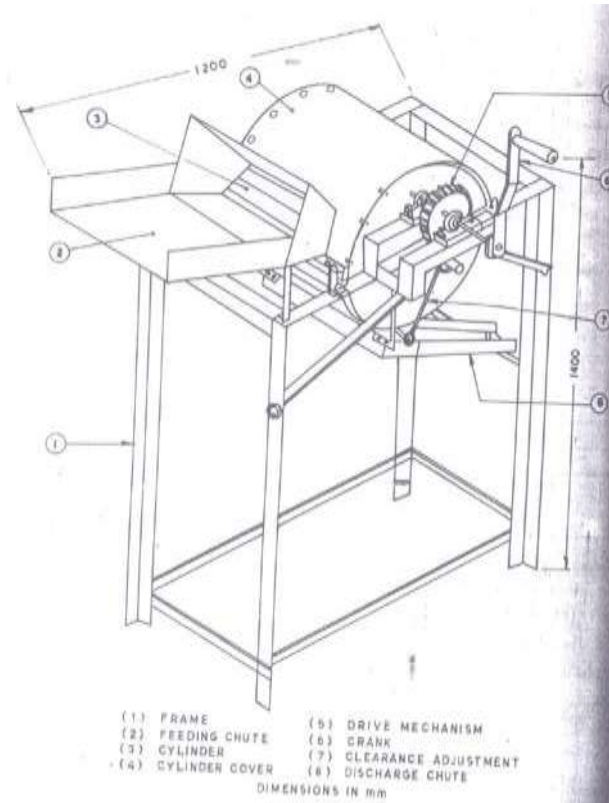


Fig. Castor Sheller