

Manual Wood Cutting Machine

Karuna Kant Nath ,40,(Gharara Dallang Ghat village of Darrang district: Assam) is a carpenter and has studied till the fourth standard. The sight of woodcutters moving the saw up and down inspired him. He felt that if he placed springs at both ends of the saw in place of the woodcutters, there would no longer be difficulty in sawing the wood manually, he set aside some money from his limited income to invest in developing the manual wood cutting machine and developed various prototypes through trial and error.

In his machine two steel channels are fitted on the two wooden columns within which the vertical up- down movement of the bed through the bearings is possible. Two composite flywheels are fitted on the top of the machine through two wooden columns. Two connecting rods made of wood are fitted with the flywheels. The other end of the connecting rods is fitted with the bed. Cycle tubes are connected to the bed to store energy during the reciprocating movement. These link mechanisms are done in such a manner that the vertical movement of the connecting rods causes a rotary motion of the wheels and a vertical linear motion of the cutter. A cutting blade is fitted on the middle of the machine vertically, wood is placed on the bed and the vertical movement of connecting rod is achieved manually either by the movement of the hand or leg with little effort. This is possible because of the movement of the flywheel that gets rotated with the additional force of inertia. Consequently the blade fitted in the middle of the machine cuts wood as a result of its linear motion.

The manual wood cutting machine costs only Rs.12, 000 as compared to an electrical saw mill which costs Rs.1,00,000. In addition there are no running costs as it does not require any power supply as compared to the saw mill which requires a 10 HP motor. The cost of cutting wood as well as the time required is less than that needed if manual labour is used.