PATENT NO. 358408
LOW COST PEPPER SEPARATOR

APPLICATION NO. 1979/CHE/2013

APPLICANT
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ABSTRACT
The invention relates to a berry separator machine for separating berry and cord from pepper corns. The berry separator machine includes a frame (H), a cylindrical drum (B) and a driving shaft means (F). A small diameter mesh (I) is provided at the bottom of the drum for collecting the berries and also to remove dust and other wastes. The apparatus is hand driven and a hand wheel (A) is provided at one end of the driving shaft (F). The apparatus further includes wooden blades (L) which are shaped such that they are operable to guide the berry towards the inner periphery of the cylindrical drum (B). During the movement of berries in the drum, tangential and movable forces are developed with the frictional force, thereby separating the berries from the cord.

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CLAIM 1

A separator machine used as a berry separator comprising of a frame (H), a cylindrical drum (B) and a driving shaft means (F), wherein; a) the cylindrical drum (B) supported on the frame (H) is defined by a length, a longitudinal axis and a circular cross-section, said cylinder further comprising an exterior surface having a circular curvature along the length of the cylindrical drum (B), said curvature corresponding to and forming the circular cross section of the cylindrical drum (B), an enclosed volume within the cylindrical drum (B) forming a working chamber, vertical planes at opposite ends forming two end surface plates, and each of the said end surface plates comprising a central circular aperture, b) the cylindrical drum (B) is further defined as a two-part cylinder comprising an upper part (J) and a lower part (K), the upper part (J) hinged to the lower part (K) and the lower part (K) fixedly mounted on the frame (H), c) the upper part (J) of the cylindrical drum (B) is a hemispherical portion having a mesh with inner peripheral work surface of the cylindrical drum (B) and a portion of the top surface forming at least one opening (C), wherein said opening is a hopper, d) the lower part (K) of the cylindrical drum (B) is a hemispherical portion also having a mesh with inner work surface and a portion of the bottom surface forming plurality of openings (I), wherein the said openings are adapted to allow passage to berries but not the cord of the berries, e) the two end surface plates of the upper part (J) each comprising a semicircular aperture along the bottom edge of the upper part (J), and the two end surfaces plates of the lower part (K) each comprising a semicircular aperture along the top edge of the lower part (K), the said set of semicircular apertures corresponding to and forming a circular cross section aperture on the cylinder end surface plates at the either end of the cylindrical drum (B), f) the driving shaft means (F) is defined by a cylindrical rod shaft terminating as free end on one end and as driving end at the other end, the said cylinder drum working chamber substantially housing the driving shaft (F), such that the driving shaft (F) rotates bidirectionally about an axis parallel to the longitudinal axis of the cylindrical drum (B) and such that a portion of the shaft projects out through the apertures formed on the end surfaces of the cylinder drum (B) on either side, the projected portions 12 supported on the frame (H),

further the driving end operably engaged with a drive wheel (A), such that user may rotate the drive wheel manually to rotate the driving shaft; whereby the driving shaft derives its rotary motion from the drive wheel (A), and g) the portion of the driving shaft means (F) within the cylinder housing is further defined by plurality of plummer block (E) and bearings engaged with the driving shaft and affixed to the frame (H), a plurality of short cylindrical pipes fitted on the driving shaft (F) and each pipe spaced away from other, a plurality of flats preferably four, radially fitted around each of the said pipes, a leaf type blade (L) mounted on each fitted flat, such that the blade (L) is orthogonal to the driving shaft (F) and blade (L) is profiled as a leaf like surface formed as an inverted elongated U with a longitudinal groove formed in between, thereby forming a plurality of spaced cutting means along the cylindrical axis, each cutter having plurality of radial blades (L) for cutting the berry from the cord;