

Title (en)
CLEANERS, CONVEYORS, GRADERS AND CLASSIFIERS FOR VEGETABLES OR FRUITS

Publication
EP 0034980 B1 19831221 (FR)

Application
EP 81400245 A 19810218

Priority
FR 8004394 A 19800222

Abstract (en)
[origin: EP0034980A1] 1. Machine for cleaning, conveying, removing waste material and grading vegetables or fruits, such as potatoes, carrots, onions, endives, beetroots, oysters or the like, constituted by parallel shafts (1 to 14) in the same plane, all rotating in the same direction and supporting equidistant discs or toothed wheels or stars (15), the desired size being obtained by changing the distance between the axes of the shafts, this distance generally being increasingly larger from the upstream end towards the downstream end of the machine in order to allow increasingly large products to pass between the shafts, each of the shafts (1 to 14), retained in a frame (22), being set in rotation, characterised by the combination : a) of the support and guidance of the bearings (25, 26) of the shafts (1 to 14) by the median and aligned central joints of two identical series of overlapping levers (27, 28) pivotally connected to each other at their two ends and at their centre in order to form a series of X and of diamond shapes which can be deformed simultaneously, the two series of levers (27, 28) being connected mechanically in order to move at the same time, or with two hand-wheels, to move independently, it being understood that the first median joint is fixed to the frame (22) and that the shafts (1 to 14) are guided by guides (77, 78), b) of the driving shafts (1 to 14) by two endless chains (61, 62) passing alternately above and below pinions (59, 60) at the ends of each shaft, each of the latter comprising, on one side a pinion (59) keyed thereon and on the other side a loose pinion (60), the loose pinion (60) and the keyed pinions (59) alternating on each side of the machine, the left-hand chain passing below the pinion of one shaft when the right-hand chain passes above the other pinion of the same shaft, the movement of the chains (61, 62) ensuring the rotation of the shafts (1 to 14) in the same direction, c) of discs or toothed wheels or stars of V-shaped profile (15), d) of flexible protection means for the ends of the shafts (1 to 14) comprising the bearings, chains and levers, the said means being compatible with the movements of the shafts, e) of receiving deflectors (45), (46) and discharge deflectors (49) adapting to the movements of the shafts (1 to 14), f) of means for cleaning the space between discs or toothed wheels or stars (15) by a comb comprising teeth directed upwards with the same spacing as the discs or stars (15) and moving periodically from one end of the machine to the other, guided by a guide parallel to the plane of the rollers.

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CPC (source: EP)
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Cited by
CN111974670A; CN105173133A; CN109351612A; CN112403876A; CN112517380A; GB2505520A; CN113428463A; NL1008218C2; DE102015104719A1; CN115138551A; US6702104B2; EP0773070B2

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