

Title (en)  
Pulping rotors.

Title (de)  
Stofflöserrotoren.

Title (fr)  
Perfectionnements aux turbines de défibrage.

Publication  
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Application  
**EP 84400817 A 19840420**

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FR 8306636 A 19830422

Abstract (en)  
[origin: ES287335U] The invention relates to a primary pulper turbine for processing recycled paper, of the type having the general shape of an helix. This turbine is formed of a shaft (2) carrying at least two helical disks (3, 4) coaxial to the shaft (2) and having a small pitch. These disks extend over at most 360 DEG and are spaced from each other along the shaft (2) by a distance of at least 1.5 times the helical pitch of a disk. The turbine carries on its base a set of radially extending fins (6, 7, 8), each one of which is curved into a spiral starting from the shaft (2). Preferably, the slant of the helical disks (3, 4, 5) relative to a plane perpendicular to the shaft (2) is approximately 15 DEG , and the disks are angularly spaced from each other by a same angle approximately equal to 360 DEG divided by the number of disks, for providing a proper dynamic balance of the turbine. The turbine of the invention is designed so as to have a high separation power for fibers, and to separate contaminants, such as plastics, from the paper pulp, without breaking them up into small pieces. This design lends itself to the building of small efficient primary pulpers, the volume of which may be less than 5 m3, as well as of larger ones.

Abstract (fr)  
Turbine de pulpeur pour le traitement de vieux papiers du type ayant la forme générale d'une hélice, caractérisée en ce qu'elle est formée d'un arbre (2) portant successivement au moins deux disques hélicoïdaux (3, 4) coaxiaux à l'arbre (2), de faible pas, s'étendant au plus sur 360° environ, séparés le long de l'arbre (2) par une distance au moins égale à 1,5 fois le pas hélicoïdal d'un disque, la base de la turbine portant un ensemble d'ailettes rayonnantes (6, 7, 8) incurvées en forme de spirale à partir de l'arbre (2).

IPC 1-7  
**D21B 1/34**

IPC 8 full level  
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CPC (source: EP US)  
**D21B 1/347** (2013.01 - EP US)

Citation (search report)  
• [A] US 3503846 A 19700331 - NARDI FRANCO  
• [A] FR 2455649 A1 19801128 - VOITH GMBH [DE]  
• [A] US 3171606 A 19650302 - LOWRY WARREN M  
• [A] US 2648261 A 19530811 - CHAPLIN MERLE P  
• [A] FR 1245815 A 19601110 - GRUBBENS & CO AKTIEBOLAG  
• [A] GB 2080146 A 19820203 - VOITH GMBH J M

Cited by  
EP1594597A4; EP0275848A1; CN112746512A; FR2908058A1; EP0275849A1; US8444807B2; US7626881B2; WO2006122538A3

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