

Title (en)  
Trough mangle

Title (de)  
Muldenmangel

Title (fr)  
Calandre en forme d'auge

Publication  
**EP 1233101 A2 20020821 (DE)**

Application  
**EP 02000771 A 20020114**

Priority  
• DE 10107120 A 20010214  
• DE 10152641 A 20011016

Abstract (en)  
The rotary iron has a rotating ironing roller (10) with a diameter of  $\geq 1600$  mm, in a flexible ironing trough. The rotary iron has a rotating ironing roller with a diameter of preferably 1600-2600 mm and especially 1800-2400 mm. The driving end side (33) of the roller has a supporting drive (32), using the drive shaft or the drive gearing to carry the end of the roller. The end wall (38) of the roller has a coupling flange, secured by screwing and/or welding, as a torque transmitter with a multi-wedge profile matching the drive shaft profile and especially the gearing, to key the roller to the drive shaft. The roller drive gearing is a planetary gear, a planetary angular gear (36), a cyclo gear or a harmonic drive gear. Both end sides of the roller have a lever mechanism (30) to give a swing movement on the frame (15). The lever mechanisms are coupled mechanically by a generally torsion-free compensating shaft (54) with a pivot axis (44) for each double lever (42) of the lever system where the roller is mounted. The roller drive can be compensated and especially geometrically or mechanically and/or hydraulically/pneumatically. For the geometrical/mechanical compensation, the weight loading by the drive on the drive lever is measured according to the lever ratio of the mechanism. Preferably, each lever arm which is affected by a pressure cylinder is shorter than the corresponding lever on the non-driven side of the roller. With a pneumatic compensation, the piston surface area is smaller than at the pressure cylinder on the non-driven side. The lever mechanisms at both end sides of the roller are given a swing movement by pressure cylinders (46). The flexible ironing trough is composed of a number of self-sufficient trough sections with independent heating energy supplies. Each trough section has its own connection for heating energy and/or escape of condensation, in a parallel flow array. The trough half-sections are joined together by a longitudinal joint along the line of the roller, and especially a longitudinal welded seam along the bottom of the trough curve, so that both half-sections have the same bending resistance. The ironing roller is wrapped with a covering, continuously closed by a bonding seam without overlap or projection. The wrapping is of a felt material.

Abstract (de)  
Muldenmangeln, die in gewerblichen Wäschereien eingesetzt werden, sollen über eine möglichst hohe Mangelleistung verfügen. Die Mangelleistung bekannter Muldenmangeln wird dadurch gesteigert, dass man mehrere Mangelwalzen (10) hintereinander anordnet. Eine solche Muldenmangel verfügt dann über zwei oder auch eine noch größere Anzahl von Mangelwalzen (10). Derartige Muldenmangeln erfordern ein Übergeben der Wäschestücke von einer Mangelwalze (10) zur anderen. Das führt in der Praxis häufig zu Betriebsproblemen. Die Erfindung schafft eine leistungsfähige Muldenmangel, indem die Mangelwalze (10) einen gegenüber herkömmlichen Muldenmangeln vergrößerten Durchmesser aufweist. Es hat sich überraschend gezeigt, dass eine Muldenmangel mit nur einer im Durchmesser vergrößerten Mangelwalze (10) zu einer überproportionalen Steigerung der Mangelleistung führt. <IMAGE>

IPC 1-7  
**D06F 65/00**; **D06F 65/08**; **D06F 67/10**

IPC 8 full level  
**D06F 65/00** (2006.01); **D06F 65/08** (2006.01); **D06F 67/10** (2006.01)

CPC (source: EP US)  
**D06F 65/00** (2013.01 - EP US); **D06F 65/08** (2013.01 - EP US); **D06F 67/10** (2013.01 - EP US)

Cited by  
CN105862270A; GB2552018A; WO2019145113A1

Designated contracting state (EPC)  
DE DK ES FR GB IT

DOCDB simple family (publication)  
**EP 1233101 A2 20020821**; **EP 1233101 A3 20030502**; **EP 1233101 B1 20070808**; DE 50210616 D1 20070920; DK 1233101 T3 20071217; US 2002148145 A1 20021017; US 6779285 B2 20040824

DOCDB simple family (application)  
**EP 02000771 A 20020114**; DE 50210616 T 20020114; DK 02000771 T 20020114; US 7202202 A 20020207