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54 Drum for a washing machine.

57 A drum for a washing machine of the top-loading type has a peripheral access opening provided with a pair of door flaps hinged to opposite lateral edges thereof and mutually engageable for retainment in the closed position. The hinge connection between each door flap and the respective edge portion of the opening is formed by a rounded edge portion of the door flap rotatably received in a correspondingly rounded portion of a hinge element secured to the drum along the respective edge portion of the opening. The rounded portions of the door flaps and hinge elements each present a rectilinear profile, thus precluding the danger of the laundry being caught therebetween.

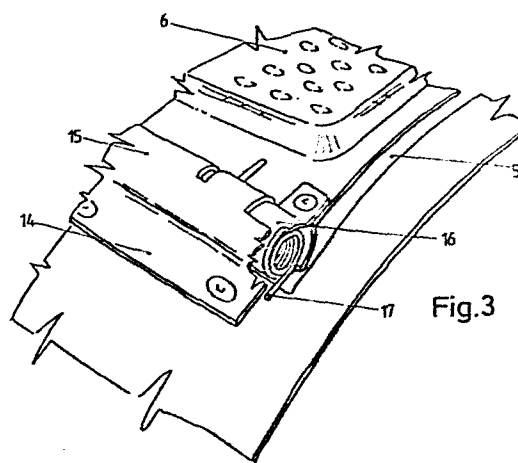


Fig.3

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Drum for a Washing MachineDescription

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The present invention relates to a drum for a washing machine of the top-loading type particularly intended for domestic use.

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The drum of a washing machine of this type is rotatable about a horizontal axis and is provided with an opening for the introduction and discharge of the laundry, said opening being formed in the peripheral wall of the drum and normally closed by means of two door flaps resiliently hinged on the drum and adapted to be brought into mutual locking engagement for ensuring the closure of the drum during operation of the machine.

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In particular, the hinge of each door flap is provided by forming the respective transverse edge portions of the door flap and of the opening of the drum to the shape for instance of a rectangularly crenellated profile, so that they can be joined in an interdigitated manner, and by subsequently forming a bore extending along the hinge axis through the above described edge portions for the introduction of a hinge rod provided with a suitable torsion spring.

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Although a hinge of the above described type provides for an efficient connection of the door flaps to the drum, it is structurally complicated and requires a considerable number of working steps for its formation.

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As the edge portions of the opening and the door flaps are formed with a non-linear profile, there is in addition the danger that the laundry contained within the drum gets caught in the spaces, however small, existing between the said edge portions, so that the laundry itself is in danger of being damaged.

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It is an object of the present invention to eliminate the above noted deficiencies by the employ of a hinge of simple construction and uncomplicated operation, in which the respective edge portions of the door flap and of the opening of the drum are formed with rectilinear

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1 profiles so as to exclude any possibility of the laundry contained in the drum getting caught between the edge portions.

These and other objects are attained according to the invention by a
5 drum for a washing machine, particularly of the top-loading type, provided with a peripheral access opening for the introduction and extraction of the laundry, and with door flaps hinged at one end on respective opposite lateral edge portions of said opening and adapted to be lockingly engaged with one another with their free ends.

10 A drum of the above noted type is characterized according to the invention in that adjacent the hinged connection the lateral edge portion of each door flap is of a rounded shape adapted to be rotatably received in a correspondingly rounded portion of a hinge element fixedly attached along the respective lateral edge portion of said opening of the drum,
15 resilient means being connected between the edge portion of said door flap and said hinge element for biasing said door flap towards its open position.

The characteristics of the invention will become more clearly evident
20 from the following description of an exemplary embodiment with reference to the accompanying drawings, wherein:

fig. 1 shows a partial sectional view of a drum according to the invention,

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fig. 2 shows an enlarged sectional view of a hinge of the drum shown in fig. 1, and

fig. 3 shows a partial perspective view of the drum shown in fig. 1.

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With reference to fig. 1, there is shown part of a drum 4 mounted for rotation about a horizontal axis within a conventional laundry washing machine of the top-loading type (not shown). Drum 4 is formed with a peripheral access opening 5 for the introduction and extraction of the
35 laundry, two door flaps 6 and 7 being resiliently hinged with one of their ends to respective lateral edge portions 8 and 9 of access opening 5, the free end portions of door flaps 6 and 7 being provided with hooks 10 and holes 11, respectively, or similar means adapted to be

1 brought into mutual engagement for securing the door flaps in a part-
ially overlapping closed position.

Shown in figs. 2 and 3 is the construction of the hinge connection for
5 the door flaps, in the example shown of door flap 6 with the respective
lateral edge portion of access opening 5. In the example shown, a
hinge 12 comprises a hinge element 13 provided with a planar portion
14 fixedly attached along the edge portion 8 of the access opening,
and with a rounded portion 15 of substantially semicircular cross-
10 section projecting partially into the opening.

On the other hand, the lateral edge portion 16 of door flap 6 is
formed to a rounded shape corresponding to that of the rounded portion
15 of hinge element 13, so that said edge portion is adapted to be
15 received therein for free pivotal movement over a limited range, per-
mitting door flap 6 to be pivoted about the axis of the thus formed
hinge connection.

Hinge 12 is further provided with at least one torsion spring 17 loc-
20 ated adjacent at least one lateral end of the hinge itself between
hinge element 13 and rounded edge portion 16 of door flap 6 so as to
bias the latter continuously towards its open position to the outside
of drum 4.

25 In comparison to conventional hinges provided with crenellated trans-
verse edges, the rounded portion 15 and edge portion 16 of door flap 6
of the described hinge present rectilinear lateral profiles practically
excluding the possibility of the laundry being caught therebetween and
being damaged in the process, thus rendering the hinge more useful and
30 efficient.

In addition, the hinge connection rods, used in conventional hinges are
eliminated, which permits the employ of torsion springs having a reduced
number of windings, whereby the construction of the drum is simplified
35 and a saving of material achieved.

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MAXIMILIANSTRASSE 43EP 949Drum for a Washing MachineP a t e n t C l a i m s

1. A drum for a washing machine of the top-loading type particularly for domestic use, provided with a peripheral access opening for the introduction and extraction of the laundry, and with closure door flaps having one of their ends hinged to respective ones of opposite lateral edges of said opening and adapted to be lockingly engaged with one another at their free ends, characterized in that adjacent the hinge connection the lateral edge portion (16) of each door flap (6, 7) is formed to a rounded shape adapted to be rotatably received in a correspondingly rounded portion (15) of a hinge element (13) fixedly attached along the respective lateral edge portion (8, 9) of said opening (5) of the drum (4) resilient means (17) being connected between said edge portion of said door flap and said hinge element for biasing said door flap towards its open position.

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2.

- 1 A drum for a washing machine according to claim 1, characterized in that said rounded portion (15) of said hinge element (13) and said lateral edge portion (16) of said door flap (6, 7) each present a rectilinear profile.

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