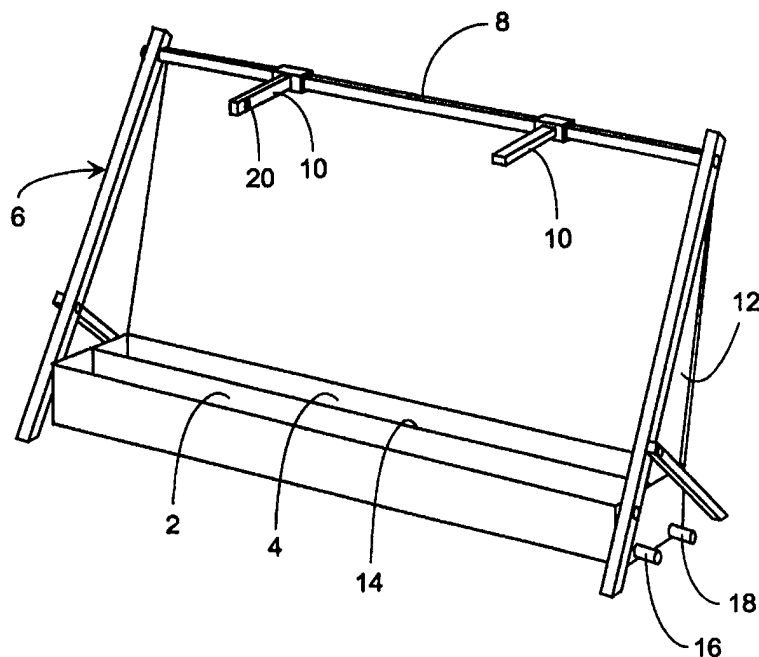




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<p>(21) International Application Number: PCT/DK97/00533 (22) International Filing Date: 21 November 1997 (21.11.97) (30) Priority Data: 1328/96 21 November 1996 (21.11.96) DK (71)(72) Applicant and Inventor: JESSEN, Jes [DK/DK]; Aalborgvej 12, DK-9560 Hadsund (DK). (74) Agent: K. SKØTT-JENSEN, PATENTINGENIØRER A/S; Lemmingvej 225, DK-8361 Hasselager (DK).</p>		<p>(81) Designated States: AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report. In English translation (filed in Danish).</i></p>

(54) Title: ARRANGEMENT FOR THE CLEANING OF VENETIAN BLINDS AND RELATED ARTICLES



(57) Abstract

An arrangement for wet cleaning of Venetian blinds is configured as an oblong, low double vessel for receiving cleaning liquid and rinsing liquid respectively for successive submersions of Venetian blinds therein, and with an upwardly-extending frame for the support of unfolded blinds in a draining and drying position over the rinsing vessel. The frame can be collapsible, while the vessel parts and associated drip-wall can be made of foil material, whereby the whole arrangement can be packed together to form a compact and easily portable unit.

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Arrangement for the cleaning of Venetian blinds and related articles.

The present invention concerns an arrangement for the
5 cleaning of Venetian blinds and related articles.

With arrangements of this type, there can immediately be envisaged diverse special brushes for in-situ use, since other special aids for the purpose are hardly to be found, but while these brushes can well be used for the removal of
10 dust and loose surface dirt, they are not suitable for more thorough cleaning of the blind's slats, e.g. with regard to the same type of dirt deposits which collect on window panes and which require thorough polishing from time to time. Where the slats of Venetian blinds are concerned, a somewhat higher
15 degree of dirt deposit than precisely that on window panes can certainly be accepted, but there can be need, however, for a "main cleaning" and thus a proper cleaning at certain, longer intervals of time. It is hereby known to make use of certain ad-hoc methods such as laborious "polishing" with a
20 wet cloth or - after the blind has been taken down - by rinsing of the blind in a wet room or by dipping it in a bath. These methods are also laborious, and they still do not give particularly perfect results.

The invention aims at providing a special arrangement
25 which is specifically applicable for the effective wet cleaning of Venetian blinds after they have been dismantled, and which is intended primarily for use in institutional cleaning sectors or by service suppliers, and respectively for private use on a rental basis.

30 The invention is based on the observation of the fact that an effective cleaning can be achieved by submerging the blind in a typical cleaning liquid, e.g. one containing a soap suitable for the purpose, and a subsequent submerging in rinsing water, after which the blind is removed from the

cleaning liquid and allowed to drain and possibly dried. On this basis, the invention provides an arrangement which comprises two parallel, oblong vessel sections, i.e. for containing a relatively modest amount of cleaning liquid and rinsing water respectively, seen in comparison with that volume which is taken up by a folded blind, and which in addition over the rinsing-water vessel part has an upright plate or hanger part with means for the support of the blind taken from the rinsing vessel in unfolded state, so that the same vessel can receive the rinsing water which drips from the blind. In connection with the upright structure, there can possibly also be provided means for the heating of the dripping blind with the object of hastening the drying hereof, and the relevant support means can be arranged to be able to support several cleaned, hanging blinds at the same time, whereby the cleaning capacity can be maximised. It will be possible that the slats of the blinds taken from the relevant arrangement will not even have chalk stains remaining from the rinsing water, and that with the use of a special rinsing liquid a coating of wax can be achieved on the slats, which consequently do not become dirty so easily.

The treatment discussed does not need to be carried out in a decidedly wet room, merely providing that there exists a drain in the floor which, possibly through suitable hoses, can receive the remains of cleaning and rinsing water in the respective vessels if or when the arrangement is no longer to be used in the relevant place. The local environment can hereby be spared from the freely dripping rinsing water, in that under the area in which the blind or blinds are hung to drain, an inclined wall is provided which leads all the dripping water directly down to the rinsing water vessel.

If the liquids are considered to be fit for reuse, or if a suitable drain does not exist in the room, the contents of

the respective vessels can eventually be fed back to transport containers by means of a small electric pump.

It is an important aspect of the invention that the arrangement disclosed, in addition to being able to be provided
5 as a fixed and possibly movable apparatus, can also be configured as a mobile and collapsible unit which comprises collapsible frame parts for the support of the above-mentioned vessel- and inclined-wall parts, while these in themselves can be configured from simple, flexible foil materials. On
10 this basis it is possible to configure the arrangement in such a manner that it can be folded together to form an easily portable structure which can be set up simply and quickly in any suitable room or, for that matter, outdoors. The folded-together parts can be packed in a long holster, e.g.
15 of canvas, with a hand-grip in the middle, and preferably with instructions for setting up and use printed in a durable manner.

The invention will now be described in more detail with reference to the drawing, in which

20 Fig. 1 is a perspective view of an arrangement according to the invention, and

Fig. 2 is a side view of a slightly modified arrangement.

The main component parts of the arrangement shown in Fig. 1 are a pair of oblong liquid vessels 2 and 4, preferably
25 built together, for cleaning and rinsing liquid respectively, and from here an upwardly-extending frame part 6 with a crossbar 8 which carries a number of projecting support arms 10 which extend in over the vessel area and at a height adequate enough to allow at least one ordinary Venetian blind to
30 be hung freely over the top of the vessel. In Fig. 2, a blind hanging in such a manner is indicated by the reference number 11. Between the crossbar 8 and the rear edge of the rinsing vessel 4, there is preferably provided an inclined plate 12.

The arrangement is used after the vessel 2 has been filled with cleaning liquid and the vessel 4 with rinsing liquid. The cleaning liquid used can be a soap solution which in a self-acting manner can loosen dirt, nicotine, grease deposits etc. within a reasonably few minutes, while the rinsing water used can be pure water, though preferably demineralized water, possibly in a slightly acid composition for extra counteraction against the formation of chalk stains on the slats of the blind, and preferably containing a waxing agent e.g. as known from car-washing plants.

The blind to be cleaned is held in dismantled and freely-hanging state over the vessel part 2 and then lowered into it, whereby it is allowed to fold completely together down in the vessel. During the lowering of the blind, however, the individual slats will come into full contact with the cleaning liquid, and the blind can possibly be moved up and down a few times so that contact with the liquid is intensified. After e.g. 5-15 minutes, both the slats and the associated cords will have been cleaned, after which the blind merely requires a suitable rinsing.

This rinsing is carried out by lifting the blind up out of the vessel part 2 and then lowering it down into its folded state in the vessel part 4. Also here it can be advantageous to lift the blind up and down a few times to create repeated rinsing turbulence at the surfaces of the slats. The handling of the blind is hereby not critical, in that even though the blind is moved slightly to the rear of the vessel 4, the rinsing liquid which drips from the blind will be led down into this vessel, i.e. under the influence of the inclined backplate 12. For corresponding reasons, this plate can possibly be arranged to be swung forward for connection with the intermediate upper edge 14 between the vessels 2 and 4, i.e. so that it serves to lead the cleaning liquid back to

the vessel 2 when the blind is raised and lowered in relation to this vessel.

After a few minutes, when the blind is considered to have been effectively rinsed, it can be suspended freely hanging
5 down from the upper support arm 10 with the view to a relatively brief draining-off period. Due to the rearwardly-inclined position of the backplate 12, it will be possible to hang e.g. a series of up to ten blinds on the arms 10 for mutual draining, even though several of them are hanging down
10 behind the rear edge of the vessel 4, in that the water dripping from these blinds will still be led down into this vessel.

After a suitable draining-off period, the blind or the related articles are simply removed from the frame for re-
15 mounting in their respective places.

The embodiment of the arrangement shown in Fig. 2 shall serve to illustrate that both the vessel parts 2, 4 and the backplate 12 can be configured from a flexible and herewith collapsible foil material assembled beforehand in a suitable
20 manner, i.e. by means of welds, so that these parts can easily be folded together, as is also the case with the remaining parts of the structure, i.e. the whole of the arrangement will easily be able to be constructed with the possibility of folding together to form a compact, portable, oblong package.

25 In special variations, the arrangement can be configured with increased frame height for adjustment to blinds of door height, for example with the use of telescopically extendible frame bars.

For a final emptying of the vessel parts 2 and 4, these
30 can be provided with lower outlet stubs 16 and 18 which can be connected to a floor drain via hoses, or e.g. via a simple pump for the re-filling of respective transport containers.

In connection with the invention, special draining-off and drying stations can be arranged whereby the drawn-up

blinds rest over special draining trays and/or are exposed to active blowing of drying air. Moreover, in connection with the vessel parts 2 and 4, means can be arranged for the automatic lowering and lifting of the blinds in relation to these
5 vessel parts.

The arrangement will also be suitable for the cleaning of roller blinds. For maintaining the central rod of these blinds, the holding arms 10 can be configured with corresponding engagement sockets. The vessels can also be used for
10 the cleaning of fittings, gratings and light tubes.

If desired, the arrangement can comprise one or more additional vessels, e.g. for wax treatment or impregnation. One or more vessels can be equipped with special means for cleaning or heating, e.g. ultrasound sources, heating elements,
15 stirrers and the like. It must be emphasized, however, that with the arrangement in its quite simple embodiment, e.g. cf. Fig. 2, extremely good help is already afforded in carrying out ordinary cleaning.

C L A I M S:

1. Arrangement for the cleaning of Venetian blinds and corresponding articles, c h a r a c t e r i z e d in that it
5 comprises a pair of oblong vessels with a height sufficient to receive a folded-together blind, and which are intended to contain cleaning liquid and rinsing liquid respectively, and an upwardly-extending frame with support means for the sus-
10 pension of an unfolded blind in a draining position over the rinsing vessel.

2. Arrangement according to claim 1, c h a r a c t e r i z e d in that in connection with an upwardly-extending frame there is provided a backplate or backsheet which from above extends forwards and downwards in an inclined manner to
15 the rear edge of the rinsing vessel.

3. Arrangement according to claim 1, c h a r a c t e r i z e d in that a crossbar on the frame is configured with support arms for several blinds.

4. Arrangement according to claim 1, c h a r a c t e r i z e d in that it is configured as a collapsible struc-
20 ture with support parts for said vessels, in that these consist of foil material.

5. Arrangement according to claim 1, c h a r a c t e r i z e d in that the vessel parts are provided with lower
25 tapping-off stubs and associated outlet hoses.

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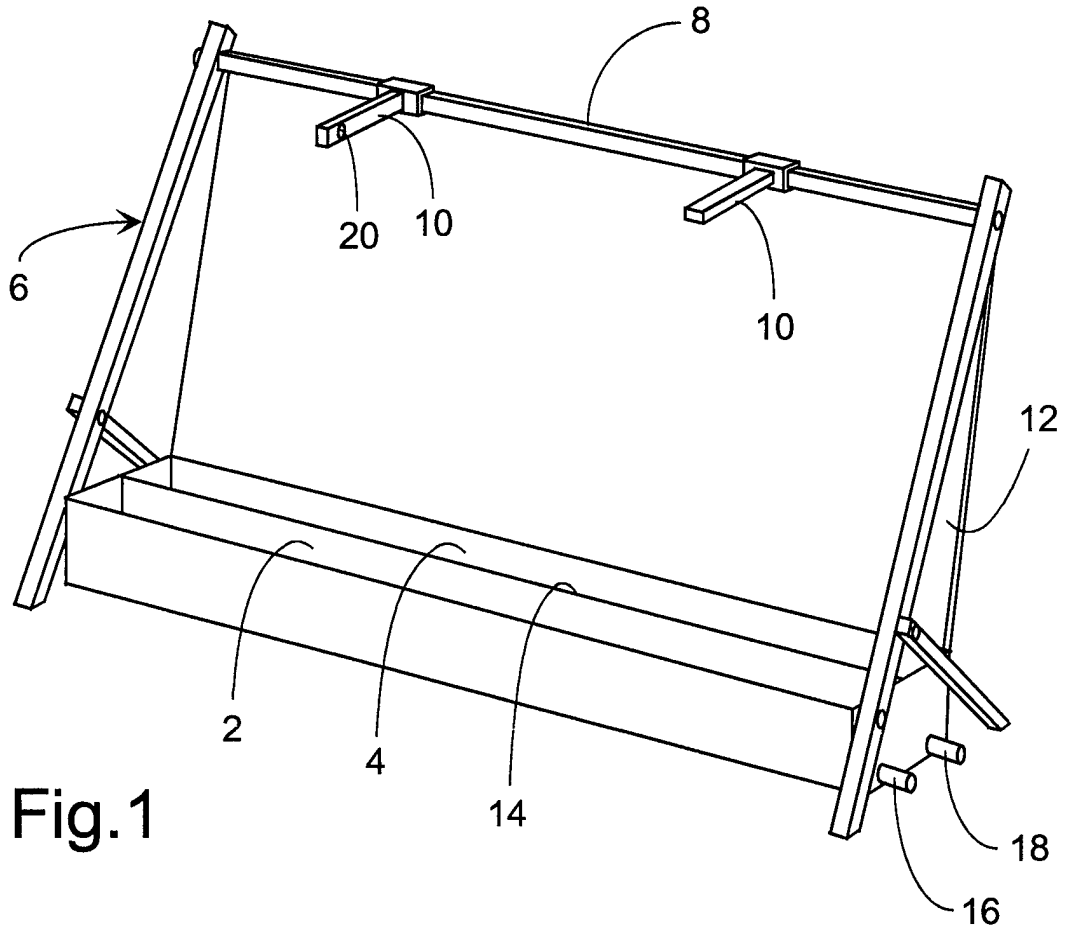


Fig. 1

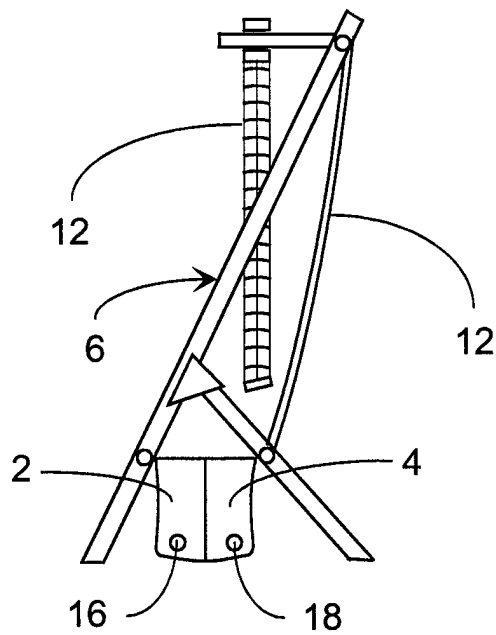


Fig. 2

INTERNATIONAL SEARCH REPORT

International application No.

PCT/DK 97/00533

A. CLASSIFICATION OF SUBJECT MATTER		
IPC6: A47L 4/00 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC6: A47L		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
SE,DK,FI,NO classes as above		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 1945164 A (SCHOT, JOHANNES CORNELIS), 19 March 1970 (19.03.70), page 2, line 29 - line 31; page 3, line 18 - line 24	1-2,5
Y	--	3
Y	US 2598798 A (E.M. KERR), 3 June 1952 (03.06.52), column 3, line 6 - line 20, figure 1	3
A	--	1,4-5
A	US 2849745 A (E.P. MADSEN), 2 Sept 1958 (02.09.58), column 2, line 31 - line 36, figure 1	1
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5044036 A (FUJIMOTO ET AL), 3 Sept 1991 (03.09.91), figures 1-2, abstract --	1
A	US 3050284 A (M.K. LERNER), 21 August 1962 (21.08.62), column 2, line 35 - line 49 -- -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

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