

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

0 368 918 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication of patent specification: **31.03.93** (51) Int. Cl.⁵: **B65D 1/40, B42F 7/14**

(21) Application number: **88906852.4**

(22) Date of filing: **08.08.88**

(86) International application number:
PCT/SE88/00400

(87) International publication number:
WO 89/00954 (09.02.89 89/04)

(54) **STORAGE RECEPTACLE FOR PAPERS AND THE LIKE.**

(30) Priority: **06.08.87 SE 8703067**

(43) Date of publication of application:
23.05.90 Bulletin 90/21

(45) Publication of the grant of the patent:
31.03.93 Bulletin 93/13

(84) Designated Contracting States:
AT BE CH DE FR GB IT LI LU NL SE

(56) References cited:
EP-A- 0 066 561
FR-A- 2 218 749

(73) Proprietor: **ARMSTRONG, Bo**
Fridkullagatan 14
S-412 62 Göteborg(SE)

(72) Inventor: **ARMSTRONG, Bo**
Fridkullagatan 14
S-412 62 Göteborg(SE)

(74) Representative: **Bjelkстам, Peter**
Radjursvägen 11
S-131 42 Nacka (SE)

Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid (Art. 99(1) European patent convention).

Description

The present invention relates to a storage receptacle according to the preamble of claim 1 for papers or sheet material, e.g. boxes for collecting periodical journals, letter baskets and the like. To reduce space requirements when transporting and storing such receptacles when empty, it is already known to push the receptacles into each other in pairs, e.g. according to the prior art illustrated in the European Patent 066 561.

The present invention has the object of providing storage receptacles which can be produced by a very simple tool without any laterally movable tool jaws and therefore there is achieved a very cheap receptacle with the aid of the invention. In addition the receptacles are implemented such that two or more receptacles can be pushed into each other within approximately the same volume as is normally required for a single receptacle.

The intended object is achieved in a very simple way by the invention being given the distinguishing features disclosed in the accompanying claims.

The invention will now be described in more detail in connection with some embodiments of the storage receptacle illustrated here as examples of a periodical journal collector and in connection with the accompanying drawings, where

- Fig. 1 is a perspective view of a periodical journal collector in accordance with the invention,
- Fig. 2 is a view from above of the collector in Fig. 1,
- Fig. 3 is a view from below of the collector in Fig. 1,
- Fig. 4 is a group of the collectors stacked one in the other,
- Fig. 5 illustrates the smallest collector of those in Fig. 4, as seen in a direction of the arrow V in Fig. 4,
- Fig. 6-7 illustrate the front of the two larger collectors shown in Fig. 4 and
- Fig. 8-10 are perspective views of further periodical journal collectors in accordance with the invention.

In Fig. 1 there is shown a periodical journal collector, where 1 denotes the right side wall thereof, 2 denotes its front wall, 3 the bottom, while 4,5,6 and 7 denote four strips or bars delimiting openings 8 - 12. The side wall 1 has a wider part 13 closest to the front wall 2 and a similarly wide part 14 closest to the lower rear wall of the collector. In the upper part of the front wall 2 there are apertures 15 and 16 for facilitating removal of the collector from such as a bookshelf. It will also be seen from Fig. 1 that between the parts 13,4,5,6,7 and 14 of the side wall there are recesses

8',9',10',11' and 12' where their depth in the plane of the bottom corresponds at least to the thickness of each of the parts 4 - 7 and 13 - 14. In addition, from Fig. 1 it can be seen that the front wall 2 has a lesser width 17 along its middle part for a distance corresponding to the openings 18 in both side walls, so that the edges of this narrower width 17 are somewhat spaced from the plane of the inner surface of the side wall 1. The different strips or bars 4,5,6 and 7 are inclined at an angle 19 to the front wall 2 of the collector and have their delimiting edges substantially parallel. The described embodiment of the collector enables the use of production means not needing to employ moving parts. The inner part or "half" of a tool for moulding the collector forms the inner surfaces of it, and the outer half of it has wide parts forming the openings 8 - 12 and 18 by direct engagement against the inner half. These parts are defined by parallel edges, although these edges can have a certain amount of rake to facilitate pulling off at the angle 19 to the front of the collector, this angle being that at which the openings 8 - 12 and bars 4 - 7 are placed. Both tool halves can thus be entirely without moving parts. The apertures 15 and 16 can also be made in this tool, although they will have somewhat sloping edges, which does not have any importance for their function.

Fig. 2 illustrates the collector from above with the right hand side wall 1 in Fig. 1, its opposing side wall 1' and front wall 2. The back wall 20 of the collector is also shown, this wall sloping at the same angle 19 as that of the openings 8 - 12 and bars 4 - 7, which is best seen by the sloping rear edge in Fig. 1.

Fig. 3 illustrates the collector seen directly from below, and the denotations in said Fig. 3 are the same as have been used earlier. There are apertures 21 in the bottom. Such apertures decrease the weight of the material required for the collector, which of course also results in its having a lower cost.

Fig. 4 illustrates a group of three collectors, denoted by 22,23,24, which are stacked one inside the other. They are similarly implemented, with the sole essential distinction that the widths 25,26 and 27 of the collectors increase from the collector 22 to the collector 24, see Fig. 5 - 7. The difference in width is approximately twice the wall thickness of the collector on the outside. Of course, more or less than three collectors can be implemented such that they can be thrust one into the other. The fact that the collectors that can be stacked one inside the other have somewhat different widths lacks any great importance in practice, since it is more a question of appearance when the collectors are placed side by side on a shelf, for example. The difference between two such collectors is so small

that it is hardly spontaneously observed.

Fig. 5 is a view in the direction of the arrow V in Fig. 4 of the smallest of the collectors in Fig. 4, and the outside width of the collector is denoted by 25.

Fig. 6 illustrates the middle one of the collectors in Fig. 4 seen from the front, and with its outside width being denoted by the numeral 26.

Fig. 7 illustrates in the same way as Fig. 6 the largest of the collectors, with its outside width denoted by 27.

Fig. 8 illustrates a collector 28 of the same principle embodiment as the one in Fig. 1. In this case the collector 28 has three strips or bars 29,30,31 and an aperture 32, the latter being a finger grip for removing the collector from a shelf. This aperture can also be achieved with the aid of a tool not having moving parts. Fig. 8 also illustrates the recesses 33,34,35 and 36 made in the plane of the collector bottom.

Fig. 9 illustrates a collector 37 with an embodiment including a front higher part 38 and a rear lower part 39. Both parts each have two side openings having recesses 38,39,40, and 41 in the plane of the bottom, and made by the outstanding parts of the outside half of the tool.

Fig. 10 illustrates a periodical journal collector 42 with a different appearance, primarily with regard to the implementation of its side walls, which have openings 43 with curved defining edges 44, both ends of which extend to the bottom of the collector and have a configuration such that the front and rear tangents 45,46 to the curved line at the bottom are parallel to the defining edge 47 of an opening 48 in each side wall of the collector and adjacent its front wall. All these lines 45,46 and 47 have the same angle 49 to the front wall of the collector 42, with the object of enabling the tool forming the openings 43 to open in the direction determined by the angle 49 when the collector is ready-moulded in the tool.

Fig. 10 also shows a long recess 50 in the plane of the bottom of the collector between the edges of the opening 43 at the tangents 45 and 46. The side opening 43 can also be given a shape such that its tangents 45 and 46 converge, i.e. they have an intersection point above the bottom of the collector. The releasing angles in the injection moulding tool will thus be greater and the ready-moulded collector is easier to remove from the tool. It is also obvious that the angle 51 for the upper defining edge of the side wall must not be greater than the angle 49.

It will be clearly understood that in the same way as a single collector can be produced in a tool with a single moulding cavity, a tool without any moving parts can be formed with such as three moulding cavities with somewhat different sizes, so

that the three collectors 22 - 24 illustrated in Fig. 4 can be produced simultaneously in the tool. This contributes further to reducing the costs of producing the periodical journal collectors.

The embodiments of the invention which have been described above can be varied by one skilled in the art, and given different embodiments without departing from the inventive concept disclosed in the claims.

Claims

1. Storage receptacle for papers, plastic folders or the like, the receptacle including a top opening, a bottom (3), a front (2) and a rear wall as well as two opposing side walls (1), each having one or more side openings (8-12), **characterized in** that said side openings (8-12) extend from the bottom (3) and upwards, in that side wall parts (4-7,13-14) are left between the apertures, and in that the bottom (3) has recesses (8'-12') along the bottom-most part of the side openings, these recesses (8'-12') being in the plane of the bottom and amounting to at least the thickness of at least one side wall (1), where the length along the bottom corresponds to the bottom-most extension of the side openings (8-12).
2. Receptacle as claimed in claim 1, **characterized in** that the tangent to the contour of the side opening (8-12) at its intersection point, situated closest to the front wall, with the bottom is at an acute angle (19) to the normal to the bottom (3) and in that the tangent to the contour of the side aperture at its intersection point, situated farthest from the front wall, with the bottom is at an acute angle (19') to the normal to the bottom (3).
3. Receptacle as claimed in claim 3, **characterized in** that the tangents are parallel or mutually intersect at a point situated above the bottom.
4. Receptacle as claimed in any of the preceding claims, **characterized in** that the outside width (25,26) of the front and rear walls of one receptacle (22,23) included in a group is somewhat less than the inside width (27) of one or more receptacles (24) further included in the group for the purpose of enabling stacking the receptacles one inside the other.
5. Receptacle as claimed in one or more of the preceding claims, **characterized in** that a further opening (18) is made in each of the side walls (1), and extends from apertures (16) in

the front wall and backwards, the rear contour of the opening (18) being situated inside a straight line from the lower-most part of the opening, this line forming an angle to the front wall (2) such that this angle is less than the angle (19) of said tangent nearest the front wall.

6. Receptacle as claimed in any one of the preceding claims, **characterized in** that openings (21) are made in the bottom of the receptacle.
7. Receptacle as claimed in any one of the preceding claims, **characterized in** that the gripping holes or apertures (16) departing from the edges of the front wall are made in the front wall (2) for the purpose of facilitating removing the receptacle from such as a bookshelf.

Patentansprüche

1. Behältnis zur Aufbewahrung von Zeitungen, Kunststoff-Broschüren u.dgl., wobei das Behältnis eine obere Öffnung, einen Boden (3), eine Vorderwand (2) und eine Rückwand sowie zwei gegenüberliegende Seitenwände (1) aufweist, die jeweils eine oder mehr Seitenöffnungen (8-12) hat, dadurch gekennzeichnet, daß die Seitenöffnungen (8-12) von dem Boden (3) und nach oben verlaufen, daß Seitenwandteile (4-7, 13-14) zwischen den Öffnungen belassen sind, und daß der Boden (3) entlang des dem Boden nächsten Teils der Seitenöffnungen Aussparungen (8'-12') hat, wobei diese Aussparungen (8'-12') in der Ebene des Bodens sind und wenigstens die Dicke wenigstens einer Seitenwand (1) aufweisen, wo die Länge entlang des Bodens der dem Boden nächsten Erstreckung der Seitenöffnungen (8-12) entspricht.
2. Behältnis nach Anspruch 1, dadurch gekennzeichnet, daß die Tangente an die Kontur der Seitenöffnung (8-12) an ihrem Schnittpunkt, welcher zu der Vorderwand am nächsten angeordnet ist, mit dem Boden unter einem spitzen Winkel (19) zu der Senkrechten zu dem Boden (3) verläuft, und daß die Tangente zu der Kontur der Seitenöffnung an ihrem Schnittpunkt, welcher von der Vorderwand am weitesten entfernt ist, mit dem Boden unter einem spitzen Winkel (19') zu der Senkrechten zu dem Boden (3) verläuft.
3. Behältnis nach Anspruch 2, dadurch gekennzeichnet, daß die Tangenten parallel zueinander sind oder sich an einem Punkt schneiden, der oberhalb des Bodens liegt.

4. Behältnis nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die äußere Breite (25, 26) der Vorder- und Rückwände eines in einer Gruppe eingeschlossenen Behältnisses (22, 23) etwas kleiner ist als die innere Breite (27) eines oder mehrerer in der Gruppe weiterhin eingeschlossener Behältnisse (24), für den Zweck der Ermöglichung einer Stapelung der Behältnisse wechselseitig ineinander.
5. Behältnis nach einem oder mehreren der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß in jeder der Seitenwände (1) eine weitere Öffnung (18) vorgesehen ist und sich von den Öffnungen (16) in der Vorderwand und nach hinten erstreckt, wobei die hintere Kontur der Öffnung (18) innerhalb einer geraden Linie von dem untersten Teil der Öffnung angeordnet ist und diese Linie einen solchen Winkel zu der Vorderwand (2) ausbildet, daß dieser Winkel kleiner ist als der Winkel (19) der Tangente, welche der Vorderwand am nächsten ist.
6. Behältnis nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Öffnungen (21) in dem Boden des Behältnisses ausgebildet sind.
7. Behältnis nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die von den Kanten der Vorderwand ausgehenden Greiflöcher oder Öffnungen (16) in der Vorderwand (2) für den Zweck einer Erleichterung des Entfernens des Behältnisses bspw. von einem Bücherbrett vorgesehen sind.

Revendications

1. Réceptacle de rangement pour papiers, chemises en matière plastique ou analogues, le réceptacle comportant une ouverture supérieure, une paroi inférieure (3), une paroi avant (2) et une paroi arrière, ainsi que deux parois latérales opposées (1) dont chacune présente une ou plus d'une ouverture latérale (8-12), caractérisé en ce que lesdites ouvertures latérales (8-12) s'étendent vers le haut à partir de la paroi inférieure (3), en ce que des parties (4-7, 13-14) des parois latérales subsistent entre les ouvertures, et en ce que la paroi inférieure (3) présente des évidements (8'-12') le long de la partie inférieure extrême desdites ouvertures, ces évidements (8'-12') étant situés dans le plan de la paroi inférieure et s'étendant sur au moins l'épaisseur d'au moins une paroi latérale (1), la longueur de ces évidements le long de la paroi inférieure correspondant à la dimen-

sion de la partie inférieure extrême des ouvertures latérales (8-12).

2. Réceptacle tel que revendiqué dans la revendication 1, caractérisé en ce que la tangente au contour de l'ouverture latérale (8-12) à son point d'intersection, situé le plus près de la paroi avant, avec la paroi arrière fait un angle aigu (19) avec la normale à la paroi inférieure (3), et en ce que la tangente au contour de l'ouverture latérale à son point d'intersection, situé le plus loin de la paroi avant, avec la paroi inférieure fait un angle aigu (19') avec la normale à la paroi inférieure (3).

5
10
15
3. Réceptacle tel que revendiqué dans la revendication 2, caractérisé en ce que les tangentes sont parallèles ou se coupent mutuellement en un point situé au-dessus de la paroi inférieure.

20
4. Réceptacle tel que revendiqué dans l'une quelconque des revendications précédentes, caractérisé en ce que la largeur extérieure (25,26) des parois avant et arrière d'un réceptacle (22,23) appartenant à un groupe est sensiblement inférieure à la largeur intérieure (27) d'un ou plus d'un réceptacle (24) appartenant également à ce groupe dans le but de permettre le gerbage des réceptacles l'un dans l'autre.

25
30
5. Réceptacle tel que revendiqué dans l'une au moins des revendications précédentes, caractérisé en ce qu'une ouverture supplémentaire (18) est prévue dans chacune des parois latérales (1) et s'étend vers l'arrière depuis des ouvertures (16) de la paroi avant, le contour arrière de l'ouverture (18) étant situé à l'intérieur d'une ligne droite à partir de la partie inférieure extrême de l'ouverture, cette ligne étant inclinée par rapport à la paroi avant (2) de telle manière que cet angle soit inférieur à l'angle (19) de ladite tangente la plus proche de la paroi avant.

35
40
6. Réceptacle tel que revendiqué dans l'une quelconque des revendications précédentes, caractérisé en ce que des ouvertures (21) sont ménagées dans la paroi inférieure du réceptacle.

45
50
7. Réceptacle tel que revendiqué dans l'une quelconque des revendications précédentes, caractérisé en ce que des évidements ou ouvertures (16) de préhension s'étendant à partir des bords de la paroi avant sont ménagés dans la paroi avant (2) dans le but de faciliter l'enlèvement du réceptacle par exemple d'une étagère.

55

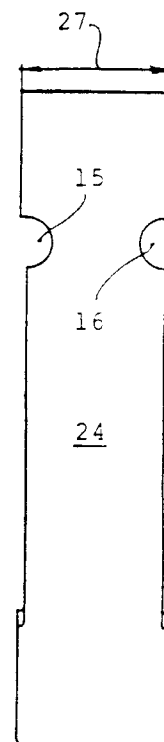
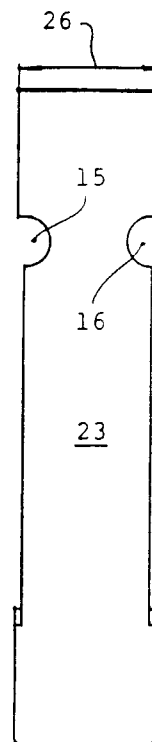
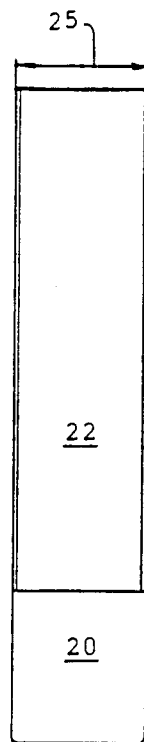
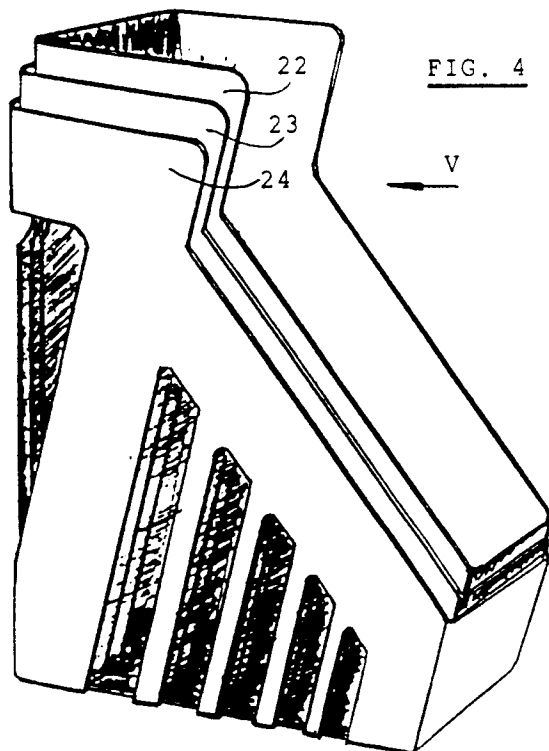
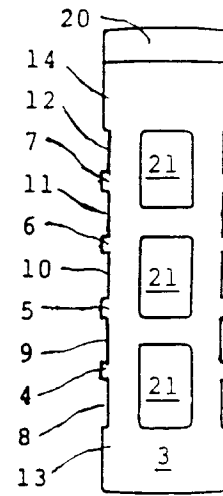
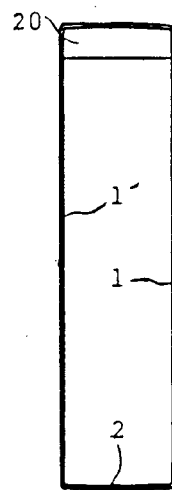
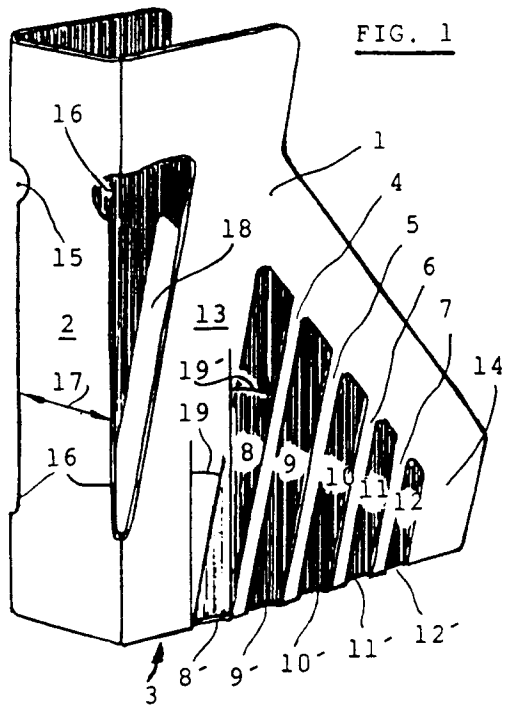


FIG. 8

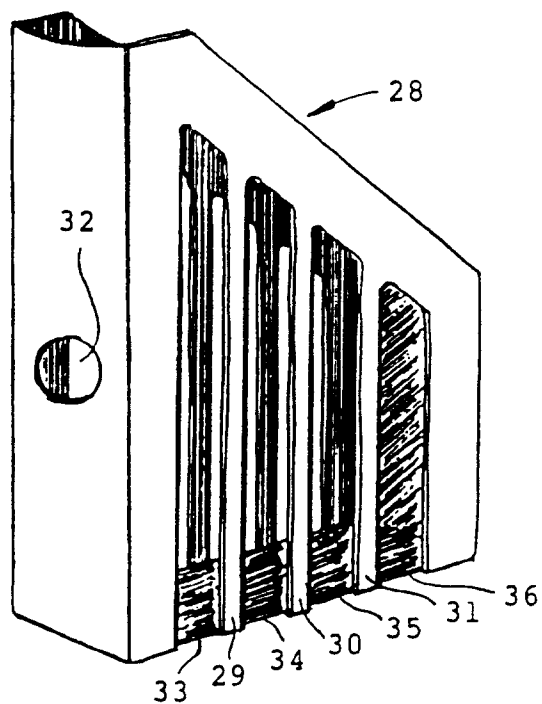


FIG. 9

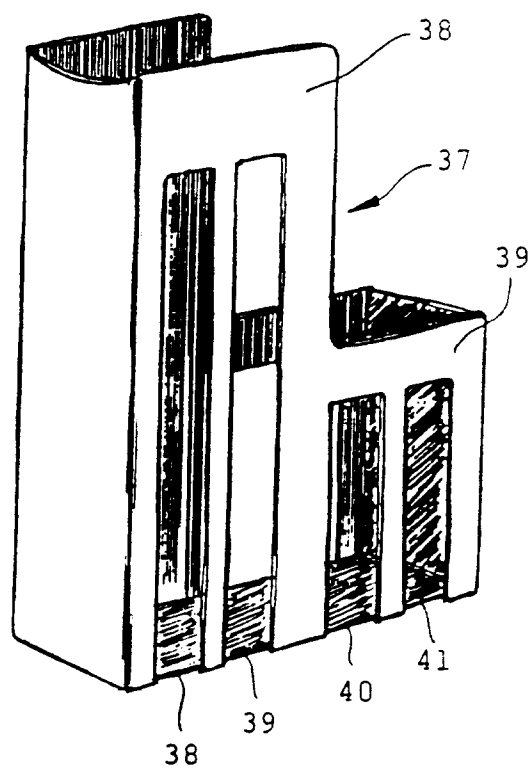


FIG. 10

