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(54) **Paper dispenser with cross contamination protection cover**

(57) A paper dispenser 1 having a housing 2 with an opening for dispensing paper extending outside the dispenser housing as a tail 3. The dispenser 1 comprises a

cross contamination protection cover 4 surrounding the tail 3, forming a narrow opening 5 and providing limited access for a user to pull the tail 3.

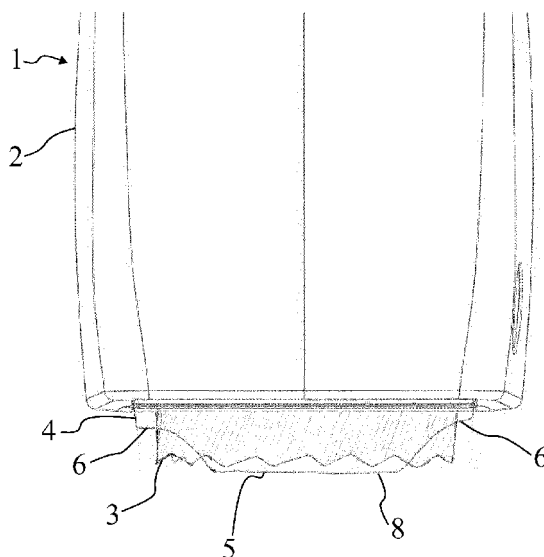


Fig. 1

Description

Field of the Invention

[0001] The present invention relates to paper dispensers. More specifically, the present invention concerns paper dispensers commonly used in bathrooms, sanitary facilities, and the like.

Prior Art

[0002] Various types of paper dispensers are commonly known. The paper is usually dispensed from a roll or from a stack of folded and pre-cut towels. Commonly a tail of a paper web or a towel is hanging out of the dispenser so that a user can grab the tail and pull it so as to acquire a required amount of paper. Alternatively in some types of dispensers, the dispensing of the paper is achieved by pushing a button, turning a knob, or by activating a motion sensor, etc. Nevertheless, many of these dispensers may still have the tail of the paper hanging out of the dispenser.

[0003] As the tail of the paper to be dispensed is hanging out of the dispenser, the tail is continuously exposed to cross contamination. In a public sanitary facility a plurality of contamination sources can be thought of. For example, persons coughing or sneezing towards the dispenser can spread diseases by droplet infection. Also, the cleaning of sanitary facilities is commonly done using a water hose, and as paper dispensers are often located near basins, dirt water is often splashed over dispensers and the paper tail hanging out of it.

[0004] These kinds of problems relating to cross contamination problems have previously been addressed by not having the tail of the paper hanging outside the dispenser. This can only be achieved with dispensers having dispensing mechanisms activated by means other than a user pulling the tail of the paper, i.e. by pushing a button, turning a knob or activating a motion sensor. It is clear that these kinds of mechanisms are more expensive to manufacture and less robust due to the increased number of the dispenser's components. As described above, the tail of the paper may still hang out of the dispenser due to the design of the dispenser, inaccurate operation of the dispenser's mechanism, or a malfunction.

[0005] Further, dispensing mechanism activated by other means than by pulling the tail of the paper to be dispensed are not suitable for so-called center-pull dispensers or folded sheet dispensers.

Objects of the Invention

[0006] An object of the present invention is to provide a affordable and robust dispenser overcoming the above mentioned problems associated with dispensers of the prior art. This object is achieved with a dispenser according to the invention as described in the characterizing

part of claim 1.

Brief Description of the Drawings

[0007] The invention is described hereafter with reference to the following figures, where:

Fig.1 illustrates a front view of a paper dispenser according to the invention

Fig. 2 is a side view of the dispenser of Fig. 1

Fig. 3 illustrates a front view of a paper dispenser according to another embodiment of the invention

[0008] It should be noted that the above mentioned figures are illustrated in a simplified manner for clarity reasons.

A Detailed Description of the Invention

[0009] Fig. 1 shows a paper dispenser 1 having a housing 2. A tail 3 of the paper to be dispensed extends from within the housing 2 of the paper dispenser 1. A cross contamination protection cover 4 surrounds the paper tail 3. Slots 6 are arranged at the cross contamination protection cover's 4 two opposing edges. An opening 5 in the cross contamination protection cover 4 can be seen more clearly in Fig. 2. The opening 5 of the cross contamination protection cover 4 surrounding the tail 3 forms a uniform edge 8. In an embodiment of the invention as seen in Fig. 3, the cross contamination protection cover is equipped with additional slots 7 between the cross contamination protection cover's 4 two opposing edges.

[0010] In this context the housing 2 holds the paper to be dispensed, which can, for example, be in the form of a roll or folded sheets. Preferably the housing 2 covers not only the paper but also any possible internal structures and mechanisms. The internal structures and mechanisms of the dispenser 1 are of a conventional type and are chosen depending of the type of the paper to be dispensed. The cross contamination protection cover 4 surrounds the tail 3 extending from within the housing 2. The cross contamination protection cover 4 is further equipped with an opening 5 for providing a passage for the paper to be dispensed. As the dispensed paper is generally thin, the opening 5 of the cross contamination protection cover 4 can be narrow, thus reducing the area delimited by the opening 5 and providing further protection against contamination. Simultaneously, the cross contamination protection cover 4 provides limited access to the user to grab the tail 3. Such an arrangement provides sufficient protection for the tail 3 against splatter and other contamination sources while the user is still able to pull the tail 3. Complex and costly dispensing mechanisms are not needed and the user does not need to shove his hand into the dispenser 1 in order to grab the tail 3.

[0011] In an embodiment according to the invention, the cross contamination protection cover 4 comprises at

least one slot 6 extending to the opening 5 of the cross contamination protection cover 4. The at least one slot 6 may be located so as to provide the user access to either one of the opposing edges of the paper 3. Advantageously, there are two slots 6 located at both of the opposing edges for providing the user with access to both of the edges of the tail 3. In such an arrangement the pulling force is applied symmetrically, thus facilitating proper operations of the dispensing mechanism.

[0012] In a further embodiment, the cross contamination protection cover 4 comprises at least one slot 7 extending to the opening 5 of the cross contamination protection cover 4. The at least one slot 7 may be located so as to provide the user access to the tail 3 of the paper. For this purpose the at least one slot 7 is located between the two opposing edges. Advantageously, the at least one slot 7 is located symmetrically around the center of the paper between the two opposing edges. If there is only one slot 7, it should be located in the middle between the two opposing edges.

[0013] It should be noted that a dispenser 1 according to the invention may comprise a combination of at least one slot 6 at either one, or both, of the opposing edges, and at least one slot 7 between the opposing edges.

[0014] In yet another embodiment of the invention, the edges 8 of the opening 5 of the cross contamination protection cover 4 are at least partially serrated. This allows the user of the dispenser 1 to cut a desired length of the paper using the serrated edge 8. This is particularly useful for dispenser used with a continuous web of paper. The serrated edge 8 renders useless the need for complex and expensive dispensing mechanism cutting the web in sheets. Furthermore, when the serrated edge 8 is used to cut the paper, the tail 3 is always of a suitable length, i.e. not extending outside of the cross contamination protection cover 4.

[0015] In a further embodiment of the invention, the cross contamination protection cover 4 is made of a transparent material, such as a clear plastic. This makes the use of the dispenser 1 more intuitive for the user, as the tail 3 of the paper can be seen in its whole.

[0016] In still a further embodiment, the cross contamination protection cover 4 is formed as an integral part of the housing 2. Such an arrangement helps to reduce costs related to the manufacturing and assembly of the dispenser 1.

terized in that the cross contamination protection cover (4) comprises at least one slot (6) extending to the opening (5) of the cross contamination protection cover (4) for providing a user with access to either one of the opposing edges of the paper for the purpose of pulling the tail (3).

3. A paper dispenser (1) according to claim 1 or 2, **characterized in that** the cross contamination protection cover (4) comprises at least one slot (7) extending to the opening (5) of the cross contamination protection cover (4) for providing a user with access to the tail (3) of the paper between its two opposing edges for the purpose of pulling the tail (3).
4. A paper dispenser (1) according to any of the preceding claims, **characterized in that** the opening (5) of said cross contamination protection cover (4) has an at least partially serrated edge (8).
5. A paper dispenser according (1) to any of the preceding claims, **characterized in that** the cross contamination protection cover (4) is transparent.
6. A paper dispenser (1) according to any of the preceding claims, **characterized in that** the cross contamination protection cover (4) is an integral part of the paper dispenser's housing (2).

Claims

1. A paper dispenser (1) having a housing (2) with an opening for dispensing paper extending outside the dispenser housing as a tail (3), **characterized by** a cross contamination protection cover (4) surrounding the tail (3), forming a narrow opening (5) and providing limited access for a user to pull the tail (3).
2. A paper dispenser (1) according to claim 1, **characterized in that** the cross contamination protection cover (4) comprises at least one slot (6) extending to the opening (5) of the cross contamination protection cover (4) for providing a user with access to either one of the opposing edges of the paper for the purpose of pulling the tail (3).

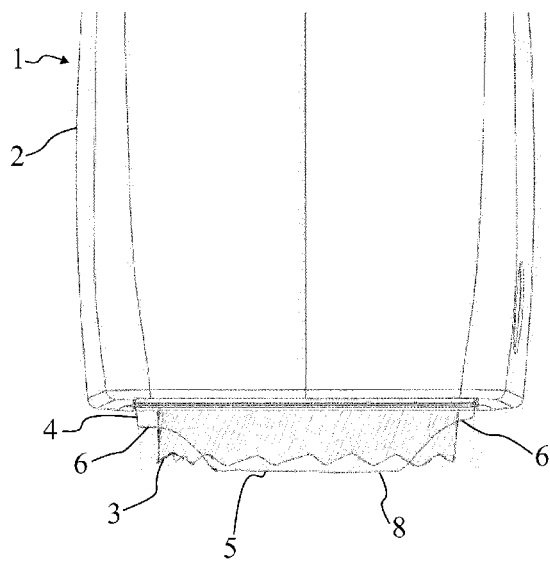


Fig. 1

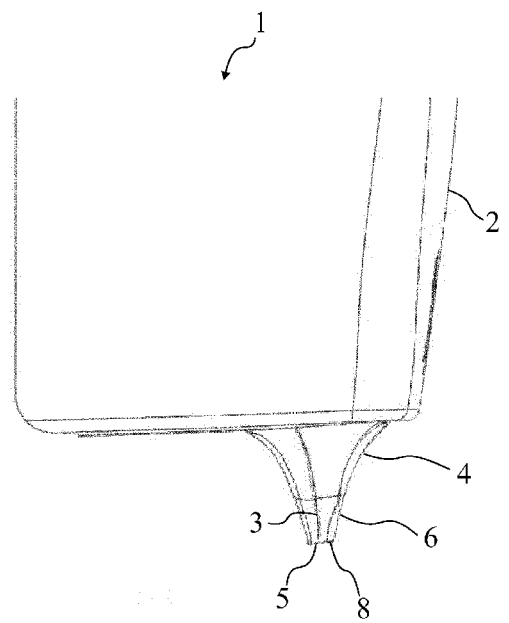


Fig.2

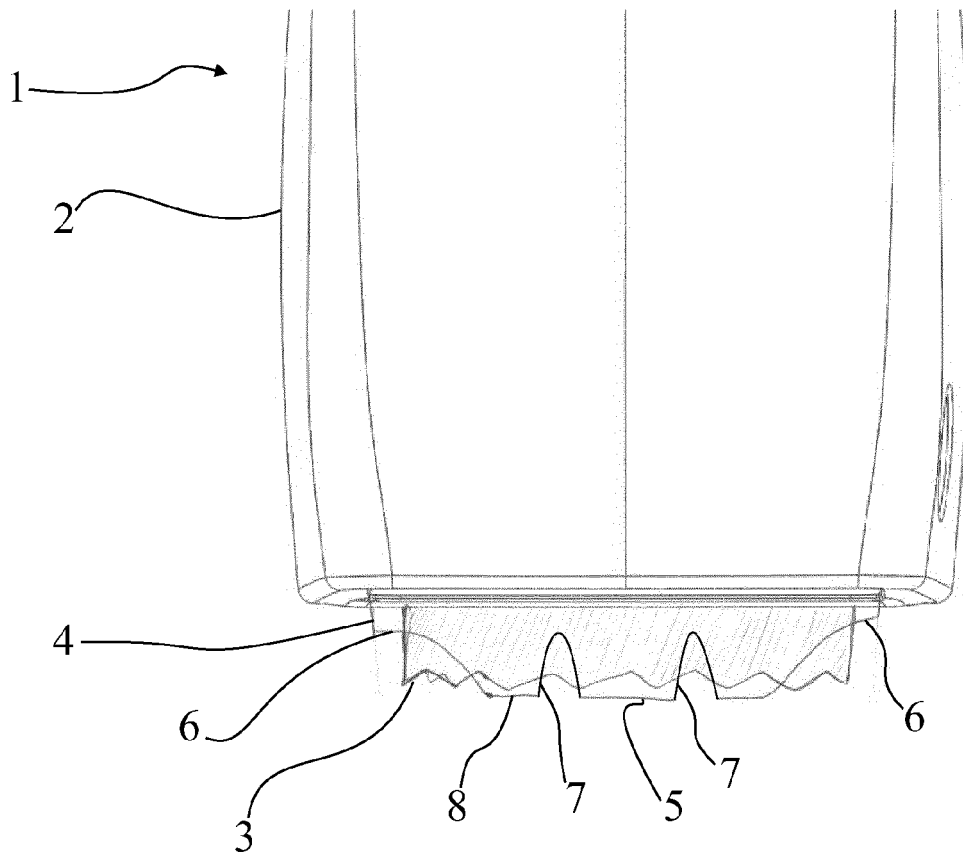


Fig.3



EUROPEAN SEARCH REPORT

Application Number
EP 11 39 7532

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2006/261076 A1 (ANDERSON STEPHEN [US]) 23 November 2006 (2006-11-23) * figures *	1	INV. A47K10/38 A47K10/42
A	----- US 2008/135595 A1 (CHANG SHIH-KUO [TW]) 12 June 2008 (2008-06-12) * abstract; figures *	1	
A	----- CA 2 238 947 A1 (MICKLICH BRIAN MICHAEL [CA]) 26 November 1999 (1999-11-26) * figure 1 *	3	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47K
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 25 April 2012	Examiner Clasing, Martina
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 11 39 7532

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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25-04-2012

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