The invention concerns a folded paper dispenser comprising a housing surrounding a paper magazine for a stack of a continuous folded paper web and provided with an outlet opening for dispensing a length of paper from said paper web and a cutting element mounted in connection with said outlet opening. The invention is characterized in that the paper web to be dispensed is led from the bottom of the stack to the outlet opening positioned at the bottom of the housing. The dispenser is preferably provided with a manually or electrically operable portioning mechanism possibly comprising a cutting drum.
FOLDED PAPER DISPENSER

[0001] The present invention concerns a folded paper dispenser comprising a housing surrounding a paper magazine for a stack of a continuous folded paper web and provided with an outlet opening for dispensing a length of paper from said paper web and with a cutting element mounted in connection with said outlet opening.

[0002] An advantage with a folded paper dispenser is that it requires a considerably smaller dimension between its back and front wall compared to a dispenser wherein the paper web is stored as a roll or reel, due to the relatively large dimension of paper rolls or reels used in such a dispenser. Further during transport and storing of paper rolls or reels there is quite a lot of waste of space.

[0003] In known dispensers for folded paper the stacked folded paper is already cut into sheets of predetermined size, an end of the lowermost folded sheet extends out of a dispensing opening of the dispenser and the lower end of next folded sheet is folded below the upper end of said lowermost folded sheet. This will result in waste of paper sheets, i.e. when one sheet of paper is intended to be dispensed some further paper sheets will drop out of the dispenser opening, especially when the level of paper sheets in the magazine is low.

[0004] From document FR 2 539 726 a dispenser according to the preamble is previously known. In this known dispenser the outlet opening is positioned at the top of the housing and the paper web to be dispensed is led from the top of the stack to the outlet opening through a narrow passage between a back wall of the housing and a guiding plate and further through a narrow passage between another guiding plate and a pivot carrying the cutting element. Such a construction makes loading of a new stack of a folded paper web relatively complicated.

[0005] The object of the present invention is to eliminate the above mentioned problems and to provide a dispenser suitable also for a smaller room. This is achieved with a folded paper dispenser wherein the paper web (3) to be dispensed is led from the bottom of the stack to the outlet opening (4) positioned at the bottom of the housing (1). By means of such a dispenser the user can always tear off a desired length of paper from the paper web without causing any waste of paper sheets simultaneously as loading of a new stack of a folded paper web is very simple.

[0006] The amount of stored paper web can be increased by increasing the height of the magazine.

[0007] According to one embodiment of the invention the dispenser is provided with a manually or electrically operable portioning mechanism between the paper magazine and the outlet opening, which portioning mechanism forms a nip through which the paper web is led.

[0008] The portioning mechanism may be connected to a lever directly or via a gear for manually operating said portioning mechanism to receive a desired length of paper, to be torn off the paper web by means of the cutting element.

[0009] According to another embodiment the portioning mechanism is driven by an electric motor for operating said portioning mechanism to receive a desired length of paper, to be torn off the paper webby means of the cutting element.

[0010] In a preferred embodiment the portioning mechanism comprises a cutting drum provided with a cutting mechanism comprising said cutting element for cutting a predetermined length of paper from the folded paper web stored in the paper magazine and guided to the cutting drum by means of a cylinder or other member, each time the cutting drum is rotated one revolution.

[0011] The stack of folded endless paper web to be inserted into the magazine can either be wrapped by paper or plastic or packed into a box, whereby one end of the folded paper web is fed from the wrapped stack or from the box to the nip between the press roll and the cutting drum, whereby the end of the paper web will come out of the dispenser opening by rotating the cutting drum.

[0012] In the following the invention will be disclosed in more detail with reference to the enclosed drawing, wherein:

[0013] FIG. 1 shows a schematic side view of a first embodiment of a folded paper dispenser according to the invention;

[0014] FIG. 2 shows a schematic side view of a second embodiment of a folded paper dispenser according to the invention; and

[0015] FIG. 3 shows a schematic side view of a preferred embodiment of the invention.

[0016] The dispenser shown in FIG. 1 comprises a housing 1 surrounding a paper magazine 2 for storing a stack of a folded paper web 3 and provided with an outlet opening 4 for dispensing said paper web 3. A cutting element 5 is mounted in connection with the outlet opening 4, enabling a user to tear off a desired length of paper from the folded paper web 3.

[0017] In the embodiment shown in FIG. 2 the dispenser is provided with a portioning mechanism 6, 7 between the paper magazine 2 and the outlet opening 4, forming a nip 8 through which the folded paper web 3 is led. The portioning mechanism 6, 7 is either manually or electrically operable. In the shown embodiment said portioning mechanism 6, 7 comprises two cylinders in contact with each other, whereby at least one of the cylinders is intended to be manually e.g. by means of a lever (not shown) connected directly or via a gear to said cylinder, or electrically, e.g. driven by an electric motor (not shown), rotated in order to portion a desired length of paper from the stack of folded paper web 3, which length of paper a user can tear off by means of the cutting element 5.

[0018] In the preferred embodiment shown in FIG. 3, the portioning mechanism 6, 7 comprises a cutting drum 6 provided with a cutting mechanism comprising said cutting element 5 for cutting a predetermined length of paper from the folded paper web 3 stored in the paper magazine 2 each time the cutting drum is rotated one revolution. Said cutting element 5 is preferably a toothed knife arranged to reciprocate between an inner retracted and an outer extended position during each revolution of the cutting drum 6. The paper web 3 is led from the paper magazine 2 around a cylinder 7 being in contact with the periphery of the cutting drum 6 to a nip 8 between said cylinder 7 and the cutting drum 6 and further around said cutting drum 1 and out through the outlet opening 4 of the housing 1. Each time a user pulls the end of the paper web 3 extending out of the dispensing opening 7, or push and pull a lever connected to the cutting drum or push a button to start an electric motor driving said cutting drum 6, the cutting drum 6 will rotate one revolution, whereby a predetermined sized paper sheet is cut off of the paper web 3 and the cut end of the paper web 3 will be fed out of the outlet opening 4 to the same extent as the previous end before pulling. Consequently there is no risk that more than one sheet of paper is dispensed at a time.
Due to the square cross section of the folded paper web the stacks of paper web can be packed quite tightly for instance during transport of the stack requiring about 20% less space than paper rolls.

The stack of folded endless paper web 3 to be inserted into the magazine 4 can be wrapped by paper or plastic or alternatively the stack can be packed into a box.

1. A folded paper dispenser comprising a housing surrounding a paper magazine for a stack of a continuous folded paper web and provided with an outlet opening for dispensing a length of paper from said paper web and a cutting element mounted in connection with said outlet opening, wherein the paper web to be dispensed is led from the bottom of the stack to the outlet opening positioned at the bottom of the housing.

2. The folded paper dispenser according to claim 1, wherein between the paper magazine and the outlet opening there is a manually or electrically operable portioning mechanism, forming a nip through which the paper web is led.

3. The folded paper dispenser according to claim 2, wherein the portioning mechanism is connected to a lever directly or via a gear for manually operating said portioning mechanism to receive a desired length of paper, to be torn off the paper web by means of the cutting element.

4. The folded paper dispenser according to claim 2, wherein the portioning mechanism is driven by an electric motor for operating said portioning mechanism to receive a desired length of paper, to be torn off the paper web by means of the cutting element.

5. The folded paper dispenser according to claim 2, wherein the portioning mechanism comprises a cutting drum provided with a cutting mechanism comprising said cutting element for cutting a predetermined length of paper from the folded paper web stored in the paper magazine and guided to the cutting drum by means of a cylinder or other member, each time the cutting drum is rotated one revolution.

6. The folded paper dispenser according to claim 1, wherein the stack of folded continuous paper web to be inserted into the magazine is wrapped by paper or plastic.

7. The folded paper dispenser according to claim 1, wherein the stack of folded continuous paper web to be inserted into the magazine is packed into a box.

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