



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
09.05.2007 Bulletin 2007/19

(51) Int Cl.:
B65H 19/29 (2006.01)

(21) Application number: **06122632.0**

(22) Date of filing: **20.10.2006**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

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(30) Priority: **08.11.2005 IT MI20052127**

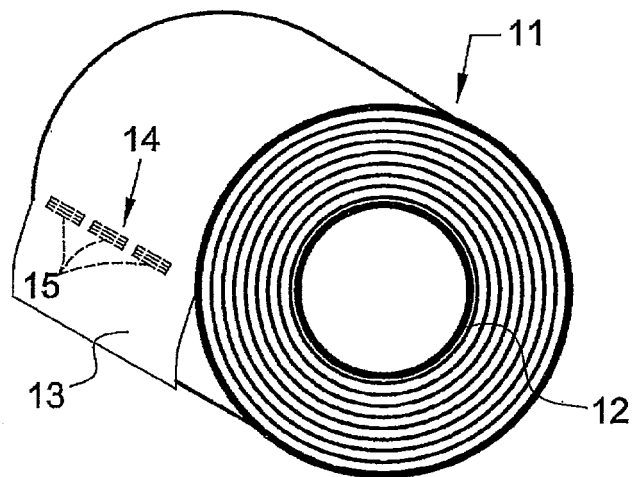
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(54) **Roll of paper with clamping of the trailing end of the web**

(57) A log or single small roll of paper with improved clamping of the final or end strip, in which a final or end strip (13) is bound to a side portion of a body of a log or single roll (11) of paper for domestic use, toilet paper and similar products through glue or similar adhesive, in which the final or end strip (13) is bound to the body of

a log or single small roll (11) through localised bonding elements or zones (14) of various size and measurement. The localised bonding elements or zones (14) comprise at least one section, drawing, logo, mark or the like (15, 115) and are realised through the deposition of glue or similar adhesive or else through the deformation of said paper adapted to receive glue or similar adhesive.

Fig. 1



Description

[0001] The present invention refers to a body of a log or single small roll (11).

[0002] In the field of the realisation of paper rolls for domestic use, of toilet paper and the like, normally denominated "log", different types of more or less complex devices are foreseen for pasting the final or end strip of a log once its winding has been completed. Such pasting at the same time also generates the bond of the strip of the single small rolls of predetermined measurement, which are generated by the cutting of the log before packaging.

[0003] Until today, it is known that once the winding of the paper has been carried out on an inner core or in any case to form a log, it is necessary to proceed by setting glue in order to have a stable bond of the end strip of the single log paper, before proceeding to the final cutting into small rolls of the desired measurement.

[0004] The glue is arranged in various modes and with various devices which, have however until now only taken care of realising a stable bond between the relevant parts: log and final strip or rather small roll and final strip. The glue, while being fed or drawn in various modes, has always characterised a portion or nearly a wide line arranged along the generatrix of the log or rather final small roll.

[0005] The quantity of glue foreseen for the realisation of the bond, if on the one hand ensures a stable positioning, on the other may determine externally visible staining and in any case involves the consumption of considerable quantities of glue.

[0006] One must also understand, in fact, that due to their nature known devices either accidentally distribute the glue also in undesired zones, with staining or in any case consumption above beyond what is due of the same, or, on the contrary, they are not able to distribute it where it is truly necessary for a stable positioning between the parts.

[0007] Hence a main object of the present invention is that of identifying a solution for the above mentioned technical problems, both for a quick and correct dispensing or placing of the glue and to avoid every possible staining.

[0008] Another object is to realise a log or small roll which externally has a correct and aesthetically pleasing positioning of the strip, in which the bond of the glue does not cause wrinkling or any case a not very pleasing appearance for the person who uses the log or small roll.

[0009] These objects according to the present invention are achieved by realising a log or single small roll with improved clamping of the end strip as set forth in the independent claims.

[0010] Further specific and detailed characteristics of the present invention are the object of the dependent claims.

[0011] The characteristics and advantages of a log or single small roll of paper with improved clamping of the end strip according to the present invention shall be clear-

er and more evident from the following exemplifying and not limiting description of an embodiment with reference to the attached figures in which:

5 Figure 1 is an external perspective view of a small roll according to a first embodiment of the present invention;

10 Figures 2 - 4 are views similar to that of figure 1 which exemplify several among other possible small roll embodiments of the present invention.

[0012] With particular reference to the figures, a small roll or in any case a portion of a log 11 is shown generated directly upon leaving a log formation machine or after the cutting of the mentioned logs into rolls of preselected size.

[0013] In the figures, an inner core 12 is shown on which paper is wound, for example in a reeling machine (not shown), for domestic use, toilet paper and similar products.

20 **[0014]** As is known, both in the case of a log or a small roll 11, this winding generates a final or end strip 13 which must be stably bound to the underlying paper portion, which characterises the body of the log or small roll 11.

[0015] Consequently, immediately downstream of the log 11 in formation or in any case of the group capable of possibly and directly generating a small roll 11, a glue release or applicator element (not shown) must be situated for realising the bond between the final strip 13 and the underlying paper portion of the log or small roll 11.

25 **[0016]** Thanks to the prevision of suitable glue release or application devices in the glue release or applicator element (not shown), a log or small roll 11 is realised in which elements or zones of localised bonding are foreseen, indicated overall with 14, which characterise a log or single small roll of paper 11 with improved clamping of the end strip according to the invention.

30 **[0017]** In fact, with particular reference for example to figure 1, it may be pointed out how, through the use of a suitable glue applicator or release element (not shown), a log or single small roll of paper 11 is obtained in which the end strip 13 is connected to the body in a predetermined zone, in particular through a series of three wave-shaped sections of glue 15.

35 **[0018]** Figure 2 shows how it is possible to realise a bond even through only one glue section 15, entirely similar to that shown in figure 1.

[0019] Figures 3 and 4 show further examples in which the end strip 13 is bound to the body of the small roll or log 11 through a concentric circle drawing 115, for example with two drawings (figure 3) or simple through a single concentric circle drawing 115.

[0020] Likewise, even if not shown, the present invention proposes to realise a bond through any logo or through marks of various type and in various quantity.

40 **[0021]** These localised bonding elements or zones 14 may be generated through the deposition on the paper surface of a quantity and distribution of glue equal to that of the section, drawing, logo, mark or any other item

which one desires to highlight through the mentioned placing.

[0022] Alternatively, the glue is situated or collected from a section, drawing, logo, mark or any other item which one desires to highlight characterised through a deformation, embossing, impression or similar treatment of a portion of the strip end of the paper which composes the log or small roll 11.

[0023] It is equally evident that in this manner it is possible to realise a personalisation or personalised motifs on the paper of the small roll or log in correspondence with the zone in which the glue is placed in a dosed measurement and preselected position.

[0024] Thus a correct and minimised placement of glue is carried out on a final paper strip of a log or small roll to be glued then on the side surface of the log or small roll itself in a quick and precise manner.

[0025] In this manner, the problems indicated in the introductive part have been resolved, which related to the gluers known and used up until now in the field of logs for realising small rolls or directly small rolls of toilet paper, paper for domestic use and the like.

[0026] The log or single small roll of paper with improved clamping of the final or end strip of the present invention thus conceived is susceptible to numerous modifications and variations, all coming under the same invention. Furthermore, in practice, any paper or glue material may be utilised, of any size, and components may be of any type according to technical needs.

5. Log or single small roll of paper according to claim 4, **characterised in that** said deformations are realised through an embossing, impression or similar treatment of a portion of the end strip.

Claims

1. Log or single small roll of paper with improved clamping of the final or end strip, in which a final or end strip (13) is bound to a side portion of a body of a log or single small roll (11) of paper for domestic use, toilet paper or similar products through glue or similar adhesive, **characterised in that** said final or end strip (13) is bound to said body of a log or single small roll (11) through localised bonding elements or zones (14) of various shape and measurement.
2. Log or single small roll of paper according to claim 1, **characterised in that** said localised bonding elements or zones (14) comprise at least one section, drawing, logo, mark or the like (15, 115).
3. Log or single small roll of paper according to claim 1 or 2, **characterised in that** said localised bonding elements or zones (14) are realised through the deposition of glue or similar adhesive.
4. Log or single small roll of paper according to claim 1 or 2, **characterised in that** said localised bonding elements or zones (14) are realised through deformations of said paper adapted to receive glue or similar adhesive.

Fig. 1

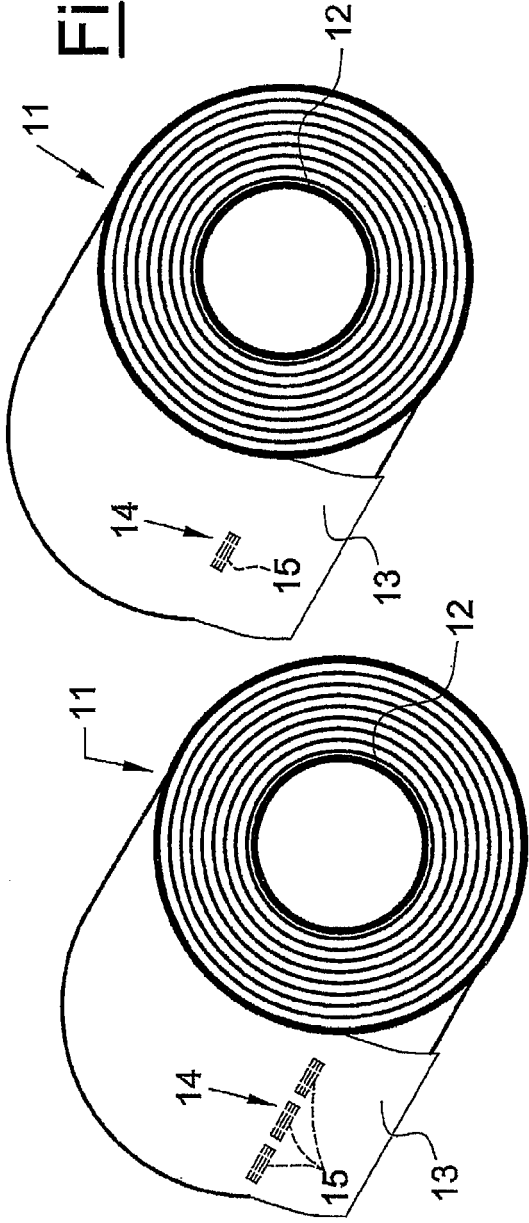


Fig. 2

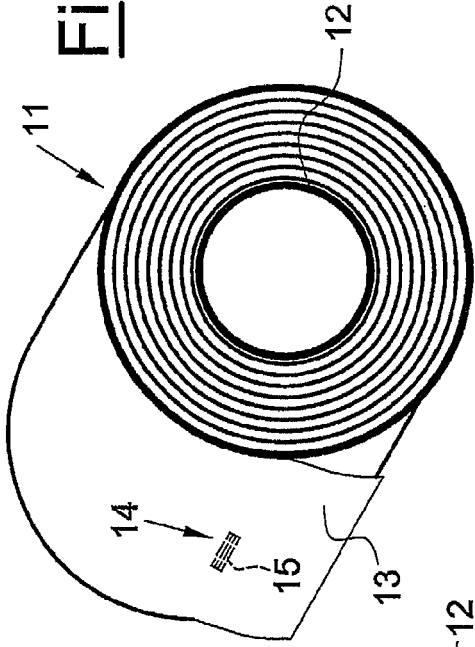


Fig. 3

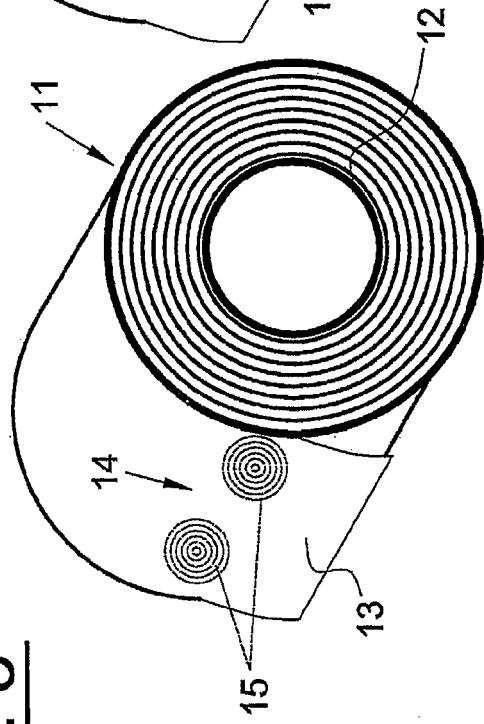


Fig. 4

