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ROLL WEB TERMINAL

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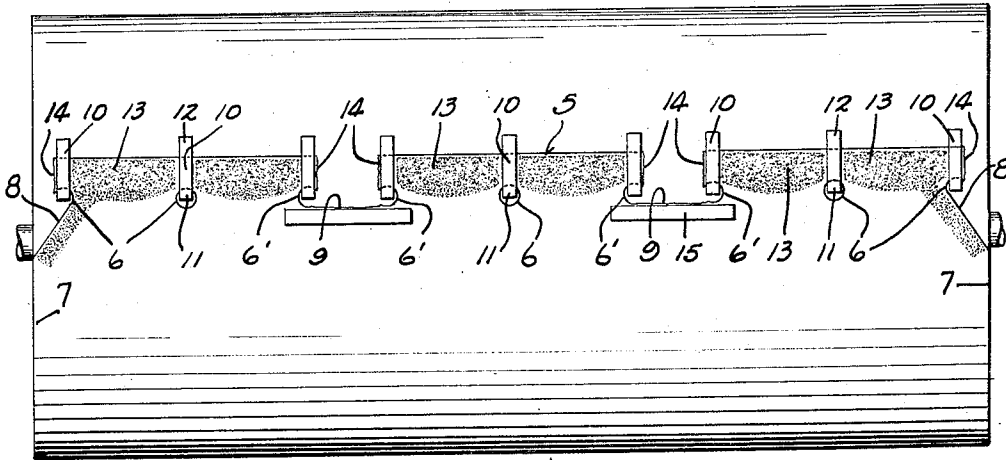


Fig. 1.

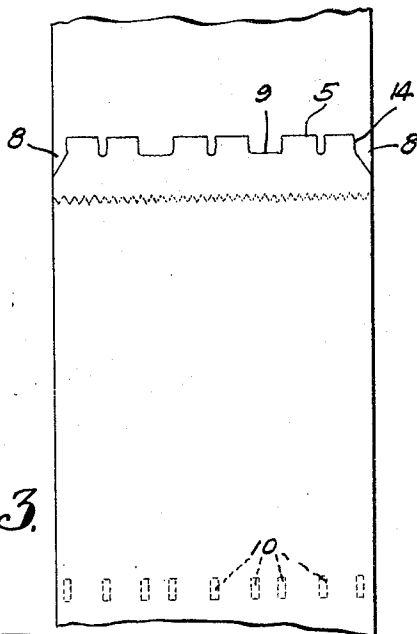


Fig. 3.

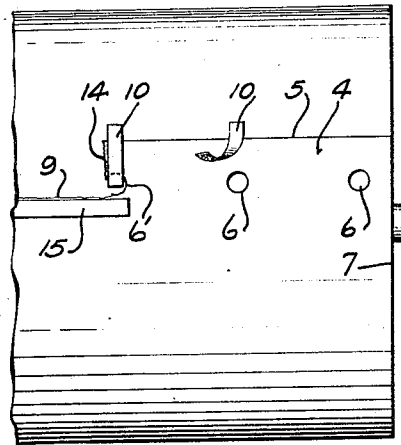


Fig. 2.

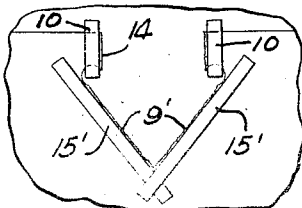


Fig. 4.

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ROLL WEB TERMINAL

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19 Claims. (Cl. 242—58)

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This invention relates to roll web terminals and methods of preparing web terminals for high speed paster joints.

For a general discussion of the nature of such a joint, reference is made to my prior Patent 2,361,857, granted October 31, 1944.

It is a primary object of the present invention to reduce the labor and time required to prepare the web, and to provide for a joint which will effect further economies in that it will reduce the amount of lap heretofore required between the ends of the joined webs.

Other objects and advantages of the invention will appear more clearly from the following disclosure thereof.

In the drawings:

Fig. 1 is a view in front elevation of a rolled web prepared for a paster joint in accordance with this invention.

Fig. 2 is a fragmentary detail view in front elevation of one end portion of the roll shown in Fig. 1, the web end being illustrated in process of preparation.

Fig. 3 is a plan view on a reduced scale of a web section containing a paster joint and severed tabs resulting from the use of the present invention.

Fig. 4 is a fragmentary detail view similar to Fig. 1, showing the modified arrangement.

In preparing the web end for a paster in accordance with the present invention, the first step is to punch in the web 4 adjacent its end 5 a number of holes 6 and 6'. From the hole nearest the side margin 7, cuts 8 are made obliquely to such margins, such cuts being tangent to the outermost holes 6. Where the guide belts of the press are to cross the paster joint, strips 15 of gummed tape are applied to the web substantially tangent to the holes 6'.

The gummed tabs 10 hold the end portion 5 of the web to the underlying face of the roll by spanning the web portions between the respective holes 6 and 6' and the end margin 5. The ends 11 of the tabs 10 lie within the respective holes 6 in adhesive connection with the underlying surface of the roll. The ends 12 of the tabs 10 are in adhesive connection with the roll beyond the margin 5. The terminal portions of the web near the end margin 5 and along the oblique cuts 8 are coated with adhesive, as indicated at 13.

When the gummed tabs 10 have been applied to clamp the end of the web to the underlying surface of the roll as above described, the unanchored portions of the web may be severed

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either by cutting or tearing if desired. I have shown torn edges at 14 beside certain of the tabs 10 and torn edges at 9 beside the reinforcing strips at 15. In practice, the edges of the tabs and gummed tape will guide the tear and the resulting edge will closely follow the applied tab or tape, the ragged effect shown in the drawings being exaggerated in order to indicate that these edges are preferably torn rather than cut. The tearing operation saves much time of a skilled attendant as compared with the time which would be required if these areas were cut free.

While the strips of gummed tape 15 are shown in Fig. 1 to be applied transversely of the sheet, it is possible to apply two strips at each point where reinforcement is desired as indicated in Fig. 4 at 15', the torn edges being there shown at 9'. The particular pattern is broadly irrelevant. However, the strips of gummed tape will not only provide reinforcement but an edge along which the paper will be guided in tearing.

Fig. 2 shows various steps in the process in various stages of completion. One of the tabs 10 has been applied while another is in the course of application. The tear at 9 has been made to one of the apertures 6' while the cut 8 shown in Fig. 1 has not yet been made. The glue has yet to be applied.

The preparation of the web end according to my former patent was entirely a matter of hand work and considerable skill was required to cut accurately the overhanging tongues shown at 16 in such patent and engaged by the tabs. According to the present invention, the use of a conventional punch suffices to locate and accurately form the overhanging portions with which the tabs are engaged. With such tabs preshaped by the hole punching operation, it becomes a simple matter, requiring much less skill, to make the cuts or tears 8 and 9 tangent to the holes.

It will be noted that between the cuts made at 8 and tears made at 9, and also between the two tears 9, there are holes 6 to which no cuts whatever are required, thus resulting in further time saving. It will be noted further that the length of the joint longitudinally of the web is only a fraction of the length of the joint resulting from the invention of my former patent. In actual practice it is found that, whereas the joint of my former patent sometimes lapped across two or even three newspaper sheets, the joint resulting from the present invention is generally confined to a single sheet. This is very important where newspapers containing the

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paster joints are rejected. The press ordinarily folds and assembles the newspapers so that the presence of a paster joint on one sheet will result in the rejection of the entire newspaper. The paper savings resulting from the present joint are, therefore, very substantial, in addition to the very substantial savings in time and labor.

It will, of course, be understood that in operation the paster joint made in accordance with the present invention functions like that disclosed in my former patent, the web tearing longitudinally along lines parallel to the edges of the tape and intersected by the margins of the apertures to prevent the tear from extending into the web beyond the apertures. The resulting joint is shown in Fig. 3. The reinforcement provided by the gummed tape at 15 or 15' is of value in supporting the joint from the belts during the travel of the web through the printing press.

I claim:

1. A method of preparing a roll web terminal for a paster joint, which comprises punching a laterally spaced series of apertures in the terminal portion of the web at points spaced from the end thereof, severing said web between consecutive apertures along a line substantially tangent to the sides of the apertures, and adhesively applying tabs of less width than the diameter of the apertures through the apertures to underlying portions of the roll and across the intervening web terminal portions to the roll beyond the web end.

2. A method of preparing a roll web terminal for a paster joint which comprises punching a series of apertures in the terminal portion of the web in a roll transversely of the web and spaced from the end thereof, adhesively applying tabs of less width than the diameter of the apertures through the apertures to the underlying portions of the roll and across the terminal portions of the web to portions of the roll lying beyond the end of the web and applying a tacky adhesive to the terminal portion of the web, the spacing of the apertures from the end of the web being shorter along the margins of said tabs than in any other direction to such end not covered by said tab.

3. The method set forth in claim 2, in which the application of adhesive to the terminal portion of the web is confined to narrow bands adjacent the end thereof.

4. The method set forth in claim 2, in which the application of adhesive to the terminal portion of the web is confined to narrow bands adjacent the end thereof, a plurality of such bands being applied between the shortest line joining the apertures and the web end.

5. A method of preparing a roll web terminal for a paster joint, which method comprises punching a transverse series of apertures through terminal portions of the web in spaced relation to the extreme end thereof, severing portions of the web along lines tangent to certain of said apertures, removing web terminal portions defined by the said severance and by said apertures, cementing tabs of less width than the diameter of the apertures through the apertures to underlying portions of the roll and across the web terminal portions to parts of the roll beyond the web end and applying a tacky adhesive to the web terminal portions between said tabs.

6. A method of preparing a roll web terminal for a paster joint, which method comprises punching a transverse series of apertures through

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terminal portions of the web in spaced relation to the extreme end thereof, cementing tabs of less width than the diameter of the apertures through the apertures to underlying portions of the roll and across the web terminal portions to parts of the roll beyond the web end, adhesively applying reinforcing tape to the web substantially tangent to certain of said apertures and tearing from the web portions thereof between consecutive tabs and said tape.

7. A method of preparing a roll web terminal for a paster joint, which method comprises punching a transverse series of apertures through terminal portions of said web in spaced relation to the extreme end thereof, fastening tabs of less width than the diameter of the apertures through the apertures to underlying portions of the roll and extending said tabs across the web terminal portions to parts of the roll beyond the web end, fastening such tabs to said parts, fastening a reinforcing tape to the face of the web in a position substantially tangent to consecutive apertures and providing a substantially continuous tearing edge between said apertures at points remote from the extreme end of the web, and tearing from the web a terminal portion thereof along lines defined by the opposite edges of two tabs and the edge of the reinforcing tape tangent to the apertures through which said tabs are connected with the underlying roll.

8. The combination with a rolled web having an aperture spaced from its end, of an adhesive tab of less width than the aperture connected through the aperture to the roll and connected across the terminal portion of the web from such aperture to portions of the roll beyond the web end, the said web having adjacent the margin of said tab a single ply portion, the length of which from said aperture to the end of the web represents at least approximately as short a distance as any distance not covered by said tab of single ply web from said aperture to said end.

9. The combination with a rolled web provided with a transverse series of apertures in its terminal portion and spaced from its end, of tabs of less width than the apertures provided with means connected through said apertures to roll portions underlying the apertures, said tabs extending across the web terminal portions and provided with means connected to roll portions beyond the web end, the length of web intervening between the apertures and the said web end being at least as short along the margins of said tabs as the length of web from said apertures to said end in any other direction not covered by said tab, the said tab margins serving as guides for the longitudinal tearing of the web from said apertures to said end, and bands of adhesive extending along the web and between such tabs.

10. The combination set forth in claim 9, in which the web terminal portion is provided with a notch lying between consecutive apertures and bounded by lines leading from the web end substantially tangent to the apertures.

11. The combination set forth in claim 9, in which the web terminal portion is provided with a notch lying between consecutive apertures through which such tabs are connected to the underlying roll, the notch extending from one of said apertures to the other, the base of the notch being substantially tangent to portions of the apertures remote from the end of the roll.

12. The combination with a rolled web provided with a transverse series of apertures in its

terminal portion and spaced from its extreme end, of tabs of less width than the apertures provided with means connected through said apertures to roll portions underlying the apertures, said tabs extending across the web terminal portions and provided with means connected to roll portions beyond the web end, a reinforcing tab extending tangentially to consecutive apertures and providing reinforcement where the web terminal portions will be supported by a belt in the printing press, the web terminal portion having a notch bounded by the apertures last mentioned, the first mentioned tabs associated therewith and the reinforcing tab being tangent to said apertures.

13. The device of claim 12, in which other terminal portions of the web are provided with bands of adhesive extending along the web end.

14. The combination set forth in claim 12, in which the reinforcing tab comprises a single strip of tape transverse with respect to the web and at least approximately parallel to the web end.

15. The combination set forth in claim 12 in which the tabs first mentioned are spaced from each other transversely of the web end and extend inwardly from the end of the web, the reinforcing tab extending transversely of the web and substantially parallel to the web end from one of said first mentioned tabs to the other, whereby to provide a substantially continuous tearing edge and a substantially continuous web reinforcement about said notch.

16. A method of preparing a roll web terminal having substantially a straight edge for a paster joint, such method comprising aperturing the web at intervals across its terminal portion and along a straight row spaced substantially equally along its length from said edge and applying dent tabs longitudinally of the web across the terminal portions thereof lying between such apertures and the end of the web and adhesively securing said tabs to the roll beyond the web terminal and beneath said apertures.

17. A method of preparing a roll web terminal having substantially a straight edge for a paster

joint which comprises punching a series of apertures in the terminal portion of the web along a straight row transversely of the web and spaced equally along its length from the edge, adhesively applying tabs of less width than the diameter of the apertures through the apertures to the underlying portions of the roll and across the terminal portions of the web to portions of the roll lying beyond the end of the web and applying a tacky adhesive to the terminal portion of the web.

18. The combination with a rolled web having substantially a straight terminal edge and having apertures disposed along a line spaced equally along its length from said edge, of an adhesive tab of less width than the aperture connected through the aperture to the roll and connected across the terminal portion of the web from such aperture to portions of the roll beyond the web end.

19. The combination with a rolled web having substantially a straight terminal edge provided with a transverse series of apertures in its terminal portion and disposed along a line spaced equally along its length from said edge, of tabs of less width than the apertures provided with means connected through said apertures to roll portions underlying the apertures, said tabs extending across the web terminal portions and provided with means connected to roll portions beyond the web end, and bands of adhesive extending along the web and between such tabs.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,160,855	Ginsberg et al.	June 6, 1939
2,361,857	McMullen	Oct. 31, 1944

FOREIGN PATENTS

Number	Country	Date
590,977	France	June 26, 1925