METHOD OF PRODUCING NEWSPAPER ASSEMBLIES

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This invention relates to a method of producing a newspaper assembly which, in the preferred form of the invention hereinafter described, comprises a regular comic section of a newspaper and a comic book section interfolded therewith, as will hereinafter appear.

So far as I am aware, comic sections used in newspapers prior to my invention were of one size, either full page or tabloid size. Within recent years small comic books about one quarter the size of a full page size newspaper have been widely circulated. My invention was prompted by the idea of including a comic book of this general character in a newspaper with the regular comic section. However, to insert a book of the type above indicated would ordinarily require a separate stuffing operation which would be slow and consequently impractical with a large newspaper, in view of the necessity of printing at a high rate of speed. It is accordingly the principal object of the present invention to print and fold on the same press and folder, at the same time and at full running speed, comic sections of different make-up and of different sizes, thus eliminating the necessity of a separate stuffing operation.

Comic books are usually printed and folded on a press that delivers the product the same as a full size newspaper is delivered. Later, it has to be folded on a folder such as is used in a bindery. It is also possible to attach a third folder to a regular newspaper folder, such as are commonly used for making a third fold in a newspaper for mailing purposes, for folding the product to one-quarter page or comic book page size. This procedure can be used on presses of the slower running type. A speed of approximately 24,000 papers per hour is a top speed for such a third fold. On up-to-date presses comics are printed at a speed of 36,000 papers per hour. With the use of the method of the present invention for printing the combination of comics and the comic book, the speed of 36,000 papers can easily be maintained.

In order to provide for printing and folding at normal speed with the regular printing and folding apparatus, I have devised a special make-up of the comic book. Instead of using a fold lengthwise in the center of the book, as is common practice in the production of ordinary comic books, I employ, in the preferred embodiment of my invention, a crosswise fold and arrange the printed matter to read lengthwise of the fold instead of crosswise. Both sections are then folded crosswise of the regular section, which provides a center fold in the book section crosswise of the printed matter. With this arrangement two sides only of the book would be open and one of the closed sides would have to be cut to permit turning the pages of the book. However, if desired slitters could be provided for cutting the pages along this line of fold so that the book could be delivered with only one fold and with three sides open instead of with only two sides open.

The invention also contemplates a special method of plating up the press for producing the combination product herein described and claimed.

Other objects and advantages of the invention will be apparent from the following detailed description, taken in connection with the accompanying drawings wherein I have shown the preferred form in which I have thus far contemplated applying the principles of the invention.

Fig. 1 is a diagrammatic view of a color press of the type used for printing comic sections of a newspaper, showing the means and arrangements of parts whereby the method of my invention is carried out;

Fig. 2 is a plan view taken substantially on the line 2—2 of Fig. 1, with a portion of the web broken away for convenience in illustration;

Fig. 3 is a plan view taken substantially on the 3—3 in Fig. 1;

Fig. 4 is an elevational view of the guiding and folding mechanism viewed the same substantially from the position indicated by the line 4—4 in Fig. 1;

Fig. 5 is a perspective view of a newspaper comic section formed in accordance with my invention;

Fig. 6 is a plan view of a modified arrangement in which the webs going into the comic book or like product are folded in lengthwise direction separately from the webs going into the regular comic or other section and are directed either to one side or the other of the latter webs;

Fig. 7 is a side view of the folding mechanism, showing also the turning bar arrangements for the comic book portion of the comic section of a newspaper;

Fig. 8 is a plan view of a web showing somewhat more clearly the way in which the quarter web sections are associated in the arrangement shown in Fig. 6;

Fig. 9 is a plan view of the guide rollers and webs at the point of entry of the latter into the folder, showing a perforator for weakening the comic book webs along the line of lengthwise
fold thereof, such perforation being an optional step in the method of my invention; and
Fig. 10 is a side view of the webs and mechanism shown in Fig. 5.

In the illustrative embodiment of the invention shown in the drawings I have shown, for the sake of simplicity, only two full size webs from which the combination product is obtained, these webs being identified in Fig. 1 by the reference letters A and B, respectively. In accordance with the customary practice in this field these webs are double the normal width of a newspaper and, after passing through the printing units indicated in the drawings by the numerals 12 and 13, respectively, they are slit along a center line indicated in Figs. 2 and 3 by the numeral 14. The slitters are not shown since they are well known in the art.

Referring first to web A, which is shown in Fig. 1 as traveling upwardly from the rear room and passing through the cylinders of a color printing unit 12, this web is merely slitted centrally as shown in Fig. 3, the slit being made on roller 15 shown in Figs. 1 and 3. One half web, identified by the letter A1, continues in the same linear path as before the slitting operation, and the other half web, marked A2, is directed over a turning bar 16 and into alignment with the half web A1. In overlying relationship therewith, as said web sections pass over a roller 17 in the course of their travel to the folder. These web sections A1 and A2 form parts of the normal size comic section of the paper and the handling thereof is in accordance with usual practice. The pages of the comic section of the paper, as shown in Fig. 5, are identified by reference characters corresponding to those applied to the webs from which they are produced.

The web identified by the letter B passes through the press unit 15 and is guided to a roller 18, on which it is slitted, not only along the medial line 14, but also on a line 19 at the center of one of the half web sections. This provides a half web section identified as B1 and two quarter web sections identified, respectively, as B2 and B3.

Web section B2 passes over a turning bar 21 and section B3 over a turning bar 22, said sections being brought by means of such turning bars and suitable guide rollers into overlapping relationship over the central portion of the half web B1. The web B is thus divided into a half web B1 and two quarter webs B2 and B3 which, together with half webs A1 and A2 pass into the folder 23 in the relationship shown in Fig. 4. The webs are thus folded lengthwise on a central line of fold indicated in Fig. 5 by the reference character 24. Thereafter the composite section including the regular comic section and the comic book section formed by the webs B2 and B3 are folded crosswise on a line of fold 25 to conform to the usual form of newspaper, it being understood that the composite comic section will ordinarily be printed in a newspaper comprising the normal sections and other feature sections.

The regular pages of the comic section will be printed in the normal way, the three sheets A1, A2 and B1 comprising twelve printed pages. The comic book instead of being printed crosswise in the same manner as the regular comic pages, will be printed lengthwise, for example, in a fashion comprising the news sections and other feature sections.

The method of printing a press for printing such a comic book or similar product, of course, has to be a special one. Semi-circular plates with reading matter arranged lengthwise of the quarter webs are employed for the comic book, and in the arrangement shown in which the press unit 15 prints both a half web which is to form a part of the regular comic section, and quarter webs which are to form the comic book. Plates with reading matter disposed crosswise of the half web are arranged on the same cylinder as the first-mentioned plates, which print lengthwise of the quarter webs.

It will be understood, of course, that an additional number of pages could be provided either in the regular comic section or in the comic book by directing additional webs into the press and
folder in the same relative arrangement above described. Furthermore, the sections need not necessarily be comic sections, but could be printed with any reading or picture matter suitable to such a combination of sections.

The invention, as claimed herein, resides in the method above described and it provides a very great improvement over any prior method available for associating such a book section with a regular newspaper section, in that both sections can be printed simultaneously on the same press and interfolded simultaneously on the same folder with the press operating at the full speed used in the production of comics and like sections in large newspaper plants.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible in view of the prior art.

What I regard as new and desire to secure by Letters Patent is:

1. A method of producing a newspaper assembly which consists in printing sections of different page size and makeup simultaneously on the same press and folding them simultaneously along a common line of fold in the same folder, each of said sections being previously folded along another line of fold.

2. A method of producing a newspaper assembly which consists in printing a plurality of sections of different page size and makeup simultaneously on the same press and interfolding them in the same folder along a plurality of common lines of fold.

3. A method of producing a newspaper assembly which consists in printing sections of different page size and makeup simultaneously on the same press, with the printed matter on the different sections reading in different directions, and folding said sections simultaneously along a common line of fold in the same folder, each of said sections being previously folded along another line of fold.

4. A method of producing a newspaper assembly which consists in printing sections of different page size and makeup simultaneously on the same press, with the printed matter on the different sections reading in different directions, and interfolding said sections in the same folder along a plurality of common lines of fold.

5. A method of producing a newspaper assembly which consists in printing on the same press webs of different size, associating said webs in predetermined alignment, and folding them together, first lengthwise and then crosswise, in the normal newspaper forming and folding apparatus of the press, one of said sections being folded over the vertical folded edge of the other section.

6. A method of producing a newspaper assembly composed of two different sized printed sections, which consists in printing on the same press webs of different size, associating said webs in predetermined alignment, and folding them together, first lengthwise and then crosswise, in the normal newspaper forming and folding apparatus of the press, one of said sections being folded along the vertical edge of the other section and being printed to read in a direction at right angles to the direction of the printed matter on the other section.

7. A method of producing a newspaper assembly composed of two different sized printed sections, which consists in printing on the same press webs of different size, associating said webs in predetermined alignment, and folding them together, first lengthwise and then crosswise, in the normal newspaper forming and folding apparatus of the press, one of said sections being folded along the vertical edge of the other section and being printed to read in a direction at right angles to the direction of the printed matter on the other section.

8. A method of producing a newspaper assembly composed of two different sized printed sections, which consists in printing on the same press webs of different size, associating said webs in predetermined alignment, and folding them together, first lengthwise and then crosswise, in the normal newspaper forming and folding apparatus of the press, one of said sections being folded along the vertical edge of the other section and being printed to read in a direction at right angles to the direction of the printed matter on the other section, the first-mentioned section being of such size as to only partially overlap the other section.

9. A method of producing a newspaper assembly which consists in printing in one press on a web of the width of four normal newspaper pages two full width pages on one-half of the web and four half width pages on the other half of the web, dividing said web into one half width and two quarter widths, arranging the quarter widths in overlying relationship, folding said half width and said quarter widths lengthwise, and thereafter folding all said widths crosswise and severing them to provide two sections of separate width, each folded along two lines of fold.

10. A method of producing a newspaper assembly which consists in printing on one half of a full width web the pages for a section of normal newspaper width, printing in the same press on each of the remaining two quarters of said full width web pages for a narrower section, dividing said full width web into one half web containing said first mentioned printed pages and two quarter webs containing said second mentioned printed pages, folding the half web on one former of the folding mechanism of the press to form the full width section, folding said quarter webs on another former of said folding mechanism to form said narrower section, associating said sections and interfolding them along a common line of fold.

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