Nov. 3, 1931. H. A. W. WOOD 1,830,416

TABLOID INSERT SLITTER

Original Filed Dec. 29, 1926

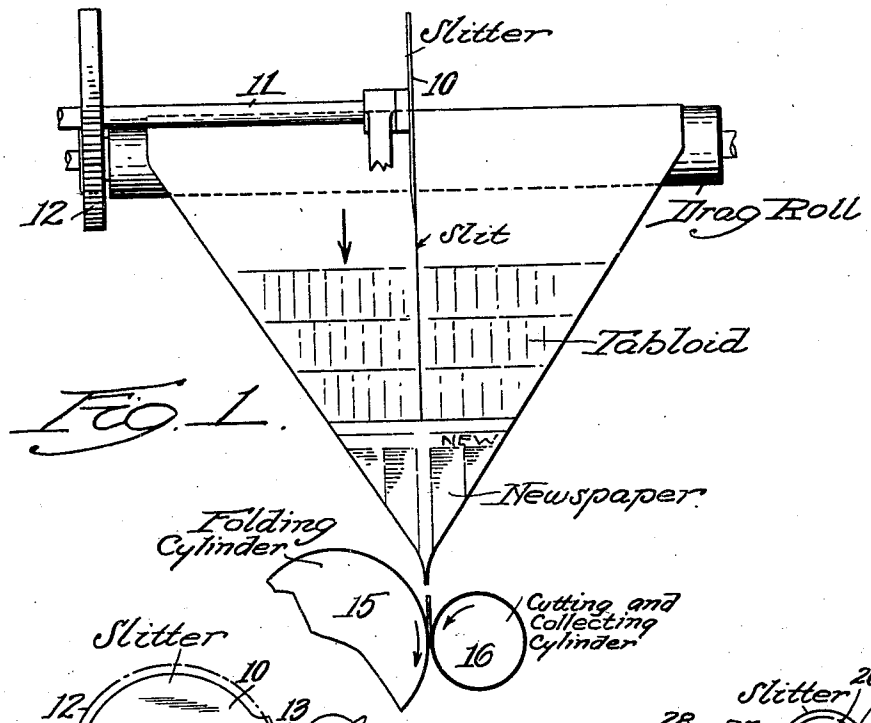


Fig. 1.

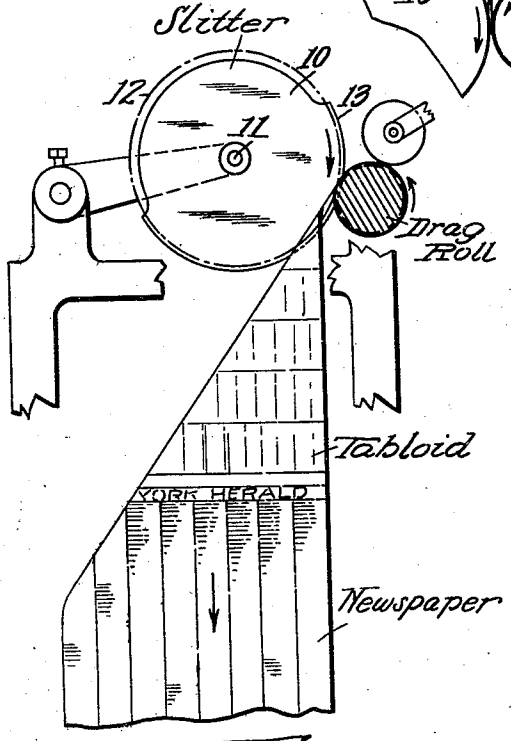


Fig. 2.

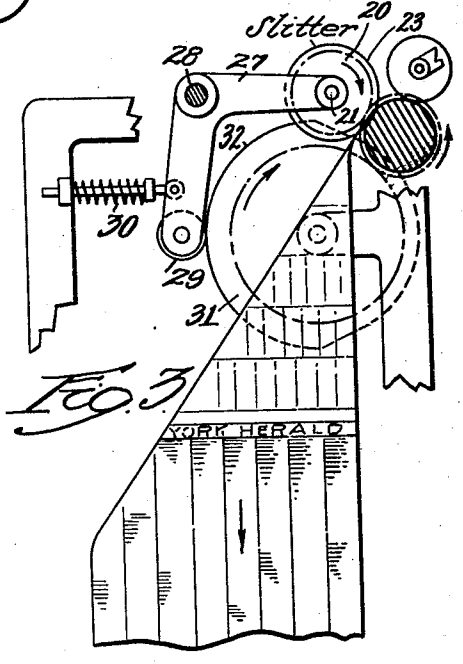


Fig. 3.

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UNITED STATES PATENT OFFICE

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TABLOID INSERT SLITTER

Application filed December 29, 1926, Serial No. 157,712. Renewed March 31, 1931.

This invention relates to the printing of a newspaper having tabloid inserts or sections. The principal object of the invention is to provide means whereby a web in which alternate standard newspaper pages and tabloid pages are printed, can be slit in the machine so that a product will be obtained consisting of a certain number of standard newspaper pages and a tabloid section of twice that number of tabloid pages. Such a product has been obtained before by assembling the same by hand. The object of this invention is to accomplish it automatically without any hand operation. More specifically the invention involves a slitter operated during the time the tabloid pages pass under it and inoperative during the time the standard newspaper pages pass under it so that the tabloid pages are slit into twice the number of sheets as the standard newspaper pages.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which

Fig. 1 is a front view of the former and associated parts of a folding mechanism provided with a slitter constructed in accordance with this invention;

Fig. 2 is a side view of the same; and

Fig. 3 is a corresponding side view of a modified form.

This invention relates to the production of that type of newspaper in which a tabloid section is associated with the regular newspaper section as it is frequently done by hand. A folder is provided with a slitter for the tabloid sections which slits the web in the center usually. Such a slitter is not needed for a standard newspaper section on account of the difference in size of the two products. In this case the plates on the plate cylinder are arranged so that the first sheet is printed in tabloid form and the second in the standard newspaper form. This invention is designed to slit alternate papers thus printed into page widths to provide the usual tabloid sheets while the succeeding ones are left unslit to provide standard sheets.

In the form shown in Figs. 1 and 2, the web printed as above indicated is run as usual over the drag roll and a slitter 10 is located in position to slit the sheet as it comes through to the former below. The shaft 11 of the slitter 10 is provided with a gear 12 which is driven from some other part of the machine at such a rate that the slitter 10 will turn exactly with the plate cylinder. In other words, its surface runs at web speed. This slitter is provided with a cutting edge 13 extending around just half of its periphery, the rest of its circumference being without a sharp edge and preferably on a smaller radius. This slitter ordinarily is placed in the center of the former and in line with what is generally the center margin of the standard newspaper.

The circumference of the slitter in this case is equal to the width of the two newspaper pages so that, as the slitter turns, it will cut through a whole tabloid section which is arranged with the columns running lengthwise of the cylinder. Then when the standard newspaper page comes into registration with the slitter, it will not cut it on account of the other half of the slitter being without a cutting edge. The standard page with the columns running around the printing cylinder will go through as usual without being slit at this point. When the tabloid sheet is slit, the slit is along the head and bottom margins of the two adjacent pages instead of the center margin, but it will be understood that these are in registration with each other along the web.

After the web thus slit intermittently passes over the former, it passes between the folding cylinder 15 and the cutting cylinder 16 which will cut the newspaper section apart from the tabloid section and fold the latter into the former. The subsequent half page newspaper fold produced in the usual way will give the newspaper pages their half page fold and the tabloid pages their full page fold. A product is delivered therefore which consists of both types of pages assembled uniformly and with no manual labor.

Of course this principle can be carried out in other forms and I have shown one of them in Fig. 3. In this case the only difference is in the slitter. The slitter 20 has a cutting

edge 23 entirely around it and is located on a shaft 21 which is arranged to rotate at any convenient speed and is supported in a pair of arms 27 keyed to a shaft 28. On this is fixed an arm having a cam roller 29 and a spring 30 for forcing it toward a cam 31. This cam is operated from the press or folder to run turn for turn with the plate cylinder. This cam is equipped with a high portion 32 on one half of its periphery and with a low portion on the other half. This will cause the slitter to be lowered into engagement with the drag roller during one half of the rotation of the plate cylinder, in other words, during the passage of one half of a complete product of the plate cylinder. It is lifted out of engagement during the other half. This has the same effect as the form shown in Figs. 1 and 2, the slitter being operative while the tabloid pages pass under it and inoperative when the standard newspaper pages pass under it.

Both of these forms constitute simple means for mechanically slitting and assembling newspaper products, part standard and part tabloid.

Although I have illustrated and described only two forms of the invention I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited to all the details of construction herein shown and described, but what I do claim is:—

1. In a newspaper printing machine folder, the combination with means for guiding a web to a folding device, the web having alternate full size and tabloid printed pages, of a slitter arranged at the center of the web and means for periodically moving the slitter back and forth to slit the tabloid pages but not the full sized pages.

2. In a newspaper folding machine, the combination with the drag roll and former, of a folding device with a bodily movable rotary slitter associated therewith for slitting the web, and means for drawing the slitter out of contact with the web periodically and maintaining it out of contact for a predetermined period of time.

In testimony whereof I have hereunto affixed my signature.

HENRY A. WISE WOOD.