

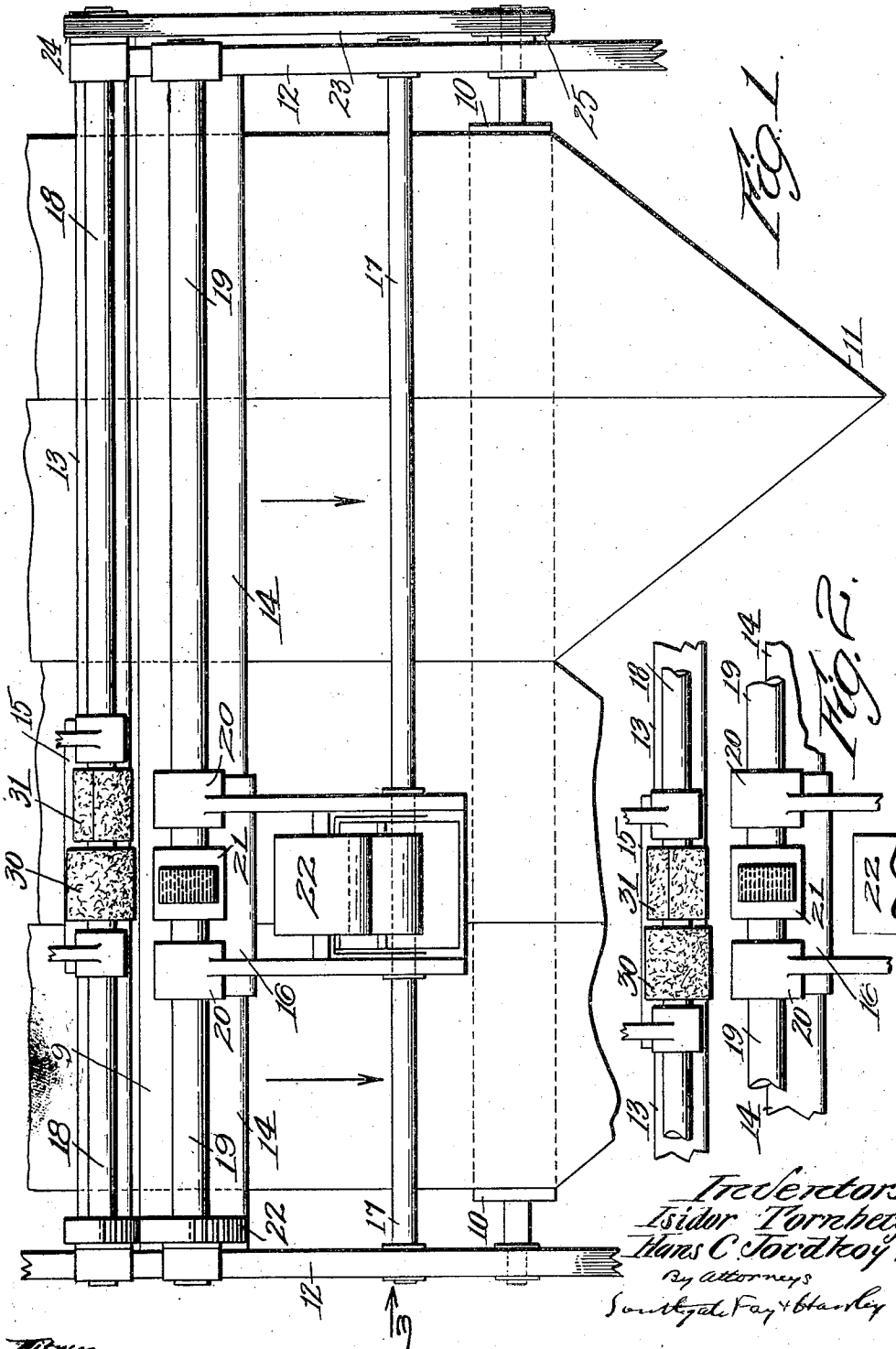
Nov. 5, 1929.

I. TORNBERG ET AL

1,734,061

LATE NEWS DEVICE

Original Filed Nov. 7, 1925 3 Sheets-Sheet 1



Witness
C. F. W. W. W.

Inventors
Isidor Tornberg
Hans C. Jordkoy
By Attorneys
Southgate Fay & Stanley

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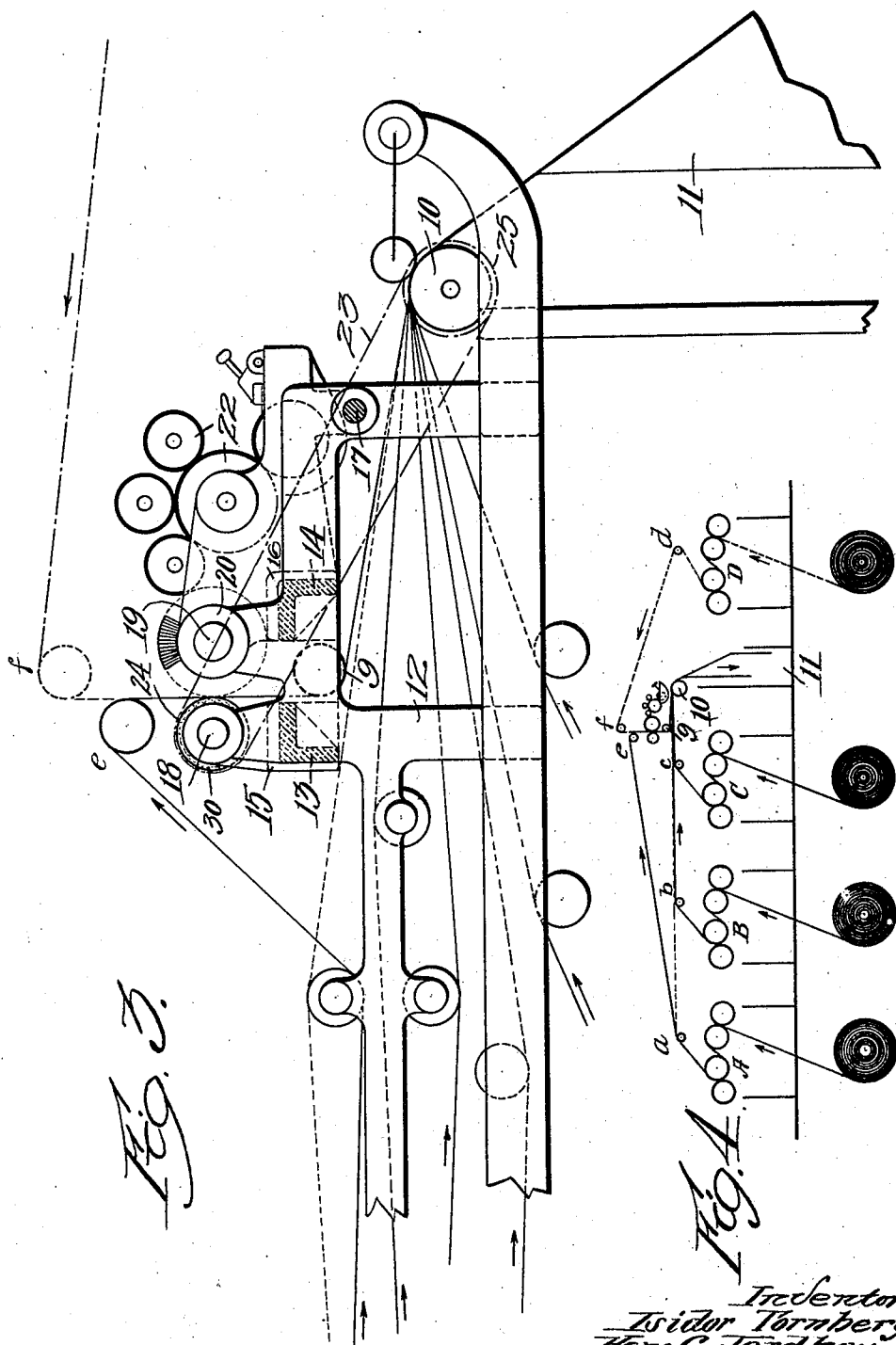
I. TORNBERG ET AL

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LATE NEWS DEVICE

Original Filed Nov. 7, 1925

3 Sheets-Sheet 2



Witness
C. F. Mason

Inventors
Isidor Tornberg
Hans C. Jordkoy
By attorneys
Southgate Fay & Stanley.

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Fig. 7

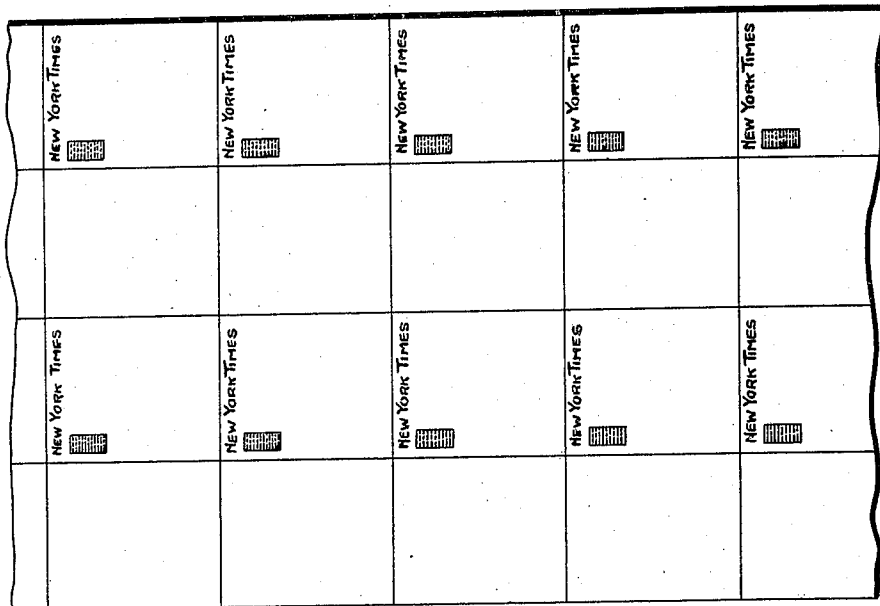


Fig. 8

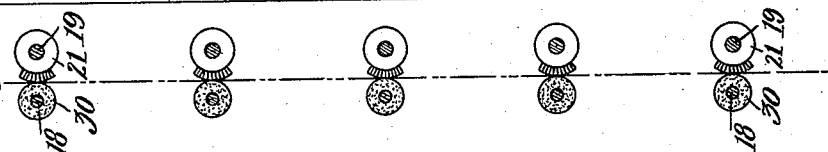


Fig. 5

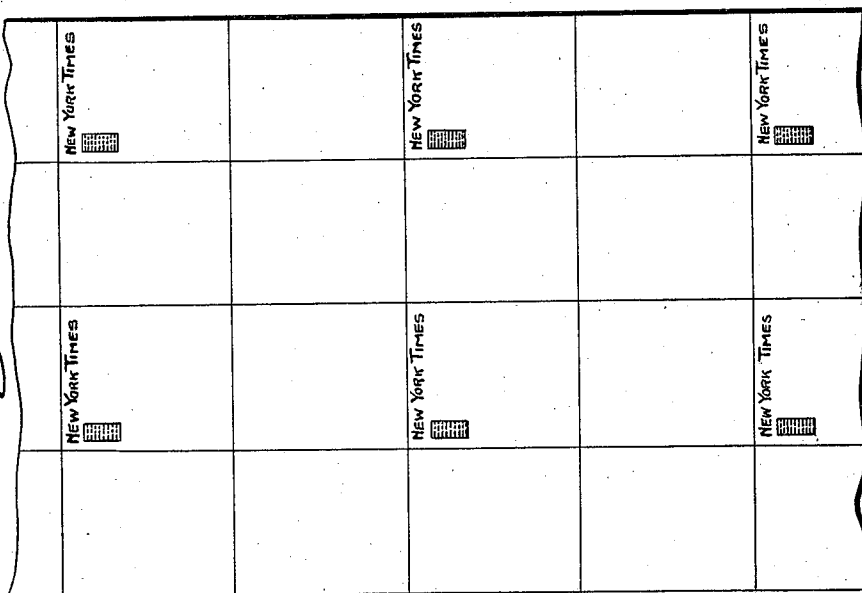
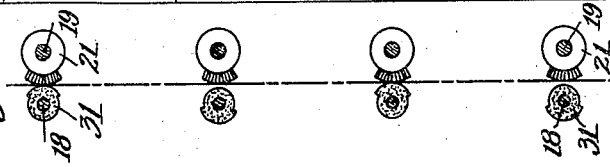


Fig. 6



Inventors
I. Tornberg
H.C. Jordkov
By attorneys
Saulsgate Fay & Harby

UNITED STATES PATENT OFFICE

ISIDOR TORNBERG AND HANS C. JORDHOY, OF PLAINFIELD, NEW JERSEY, ASSIGNORS
TO WOOD NEWSPAPER MACHINERY CORPORATION, OF NEW YORK, N. Y., A COR-
PORATION OF VIRGINIA

LATE-NEWS DEVICE

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The objects of this invention are to provide a late news device of such size that it can be placed over the folder where it will serve any of the webs coming from any of the printing units of a modern newspaper printing press; and to provide it with a comparatively light impression cylinder to make it possible to place it almost directly over the drag roller and former; also to locate it in such a position that any printing unit may be used for printing the first page of a newspaper so as to greatly increase the flexibility of the press. A further object of the invention is to provide a late news device in which it is necessary only to shift the impression roller a short distance in a lateral direction to enable it to print on a collected sheet or a non-collected sheet as may be desired, and in which the whole device can be shifted across the press very easily to permit it to print on different parts of the web and to do away with the oscillating devices ordinarily used and the necessity of slowing down the speed of the press when the late news device is used. Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is a plan of a late news device located substantially over the former of a printing press and constructed in accordance with this invention and shown in position for printing on each page or impression;

Fig. 2 is a similar view of a part of the late news device shifted to print on each alternate sheet or impression;

Fig. 3 is a side view of the same;

Fig. 4 is a diagrammatic side view showing the various web paths and the relation of the late news device thereto;

Fig. 5 is a face view of a newspaper web showing the late news imprints on the various sections as produced by this invention when collecting;

Fig. 6 is a side view showing the relative positions of the late news printing couple at the several points in the web; and

Figs. 7 and 8 are views similar to Figs. 5 and 6 showing the result when not collecting.

This invention relates to a device used in

connection with web printing presses for the purpose of printing news which comes in too late to be incorporated in the regular printing plates. This is generally accomplished by clamping a number of linotype slugs in a holder generally known as a "fudge". This fudge is arranged to be quickly clamped on a cylinder equipped with suitable printing rollers and ink supply. The impression is generally taken by an ordinary impression cylinder equipped with suitable blankets. Between these two cylinders the web is led, after it has been through the regular printing section of the press. That portion of the page on which late news is to be printed is left blank by the aforementioned printing plates and the fudge is made to register with it.

It is a well known fact that most printing presses are equipped with printing cylinders of a size to take two semi-cylindrical plates around the circumference, thus printing two standard newspaper pages for every revolution of the printing cylinders. Since the assembly of linotype slugs in a fudge must be done in as few seconds as possible, it is desirable that the fudge cylinder be of a circumference equal to only one newspaper page instead of two, as is the case with standard printing cylinders. This obviates the need for assembling two fudges instead of one.

When the two succeeding pages of the newspaper are delivered as separate copies of the paper, the late news is printed on both of them in the same relative position on the page, thus making them duplicates. When, however, the two succeeding pages are collected to make one newspaper of a greater number of pages, then it is desirable to print the late news on alternate pages, since late news is customarily printed on the front page only of any newspaper. The fudge cylinder being of a circumference of one page only, some means must be provided in the latter case to permit it to print the late news during one rotation and to prevent it from printing the late news during its subsequent rotation. In other words, it is desired that the late

news be printed at every other rotation of the fudge cylinder only.

To accomplish this result it has been customary to equip the impression cylinder with suitable cam mechanisms for the purpose of advancing it to the fudge cylinder during one half of its rotation and receding it from the fudge cylinder during the other half. This results in a complicated and a costly mechanism and materially reduces the speed of the press.

In Fig. 4 we have shown diagrammatically a newspaper printing press for the purpose of illustrating the position in which this invention is applied thereto. The printing couples A, B, C, and D, are arranged in a well known manner so that webs can pass over guide rolls *a, b, c, d, e*, and *f*, for example, to the usual former 11 from either side. All of these webs pass over the drag roller 10 which is located in the usual place. The fudge is located in a position almost over the drag roller and former so that webs either from the front or rear can pass through it before they pass under roll 9 into the former.

For this purpose as shown in the first three figures, the frame 12 of the press is modified to provide for holding a pair of supporting braces 13 and 14 extending across the press above the drag roller and finished on top and side to form supports for a pair of sliding frames 15 and 16. Also extending across the press is a shaft 17 on which the frame 16 is hung and pivotally mounted so that the main weight rests on the brace 14. The frame 12 is also modified to provide bearings for two shafts 18 and 19 which extend all the way across the press on opposite sides of the webs coming down between them.

The frame 16 is provided with side bars carrying a pair of bearings 20 between which on the shaft 19 is located the fudge cylinder 21. On this frame 16 also is mounted the inking device 22 to slide across the frame of the press on the brace 14 to any part of the press across it. In that way, any one of the four sections composing the web is adapted to receive the late news.

The diameter of the fudge cylinder is one half that of the standard printing cylinders on the press. The fudge cylinder shaft 19 is driven through gears 22 from the shaft 18 of the impression roller so as to rotate at the same surface speed but at the ratio of 2 to 3. The impression roller is two thirds the size of the fudge cylinder and is driven by means of a chain 23 and sprockets 24 and 25 from the shaft of the drag roller 10.

On the shaft 18 is located a soft surfaced impression roller 30 of sufficient width to receive the usual late news impression from the fudge cylinder 21. This impression roller is of uniform radius all the way around. On this shaft at the side of the roller 30 is another

roller 31 of a similar character except that one half of its surface is of smaller radius than the other so that it will not come into contact with the fudge cylinder 21 when arranged to cooperate therewith and not make an impression. The frame 15 which carries these impression rollers has two bearings on the shaft 18 spaced apart far enough to receive the two impression rollers 30 and 31 between them. This frame 15 can slide along the same as the frame 16 and also is adapted to be adjusted so that either one of the rollers 30 or 31 is in registration with the fudge cylinder 21. These rollers 30 and 31 can be formed integral if desired.

The diameter of the impression roller is exactly one third of that of the standard printing couples while the diameter of the fudge cylinder 21 is one half that of the standard printing couples. When the impression roller 31 is brought in line with the fudge cylinder 21 as shown in Fig. 2 it will be only on every alternate rotation of the fudge cylinder that the latter will come opposite the high or printing portion of the impression roller 31, and therefore only at these times will an impression be made. At the alternate rotations the web will not be backed up by the impression roller so, although the inked portion of the fudge cylinder engages the web, no print will be made. The succeeding rotations will bring the fudge itself opposite the low portions of the impression roller. This is shown in diagrammatic form in Fig. 5.

When the parts are in the position shown in Figs. 1 and 8, with the impression roller 30 in line with the fudge 21, an impression will be made at every rotation of the shaft 19 as indicated in Fig. 7. It will be obvious therefore that by merely shifting the frame 15 from the position shown in Fig. 1 to that shown in Fig. 2, the late news device may print on a collected sheet or on a non-collected sheet as may be desired and yet it takes only a few seconds to make the change.

As there are no oscillating devices employed, the press does not have to be slowed down by the use of this late news device. Furthermore, by shifting both frames along, the late news can be printed in any of the four parts of the web across the press. This has the additional advantage over the ordinary late news devices having heavy impression cylinders that on account of the lightness of the impression rollers it can be placed in the position shown on the press where it can operate on the web coming to the drag roller in either direction, while in ordinary late news devices only one printing unit can be used for printing the first page of the newspaper unless a plurality of them are equipped in the same way.

Although we have illustrated and described

only a single form of the invention and shown it as applied to only one type of press, we are aware of the fact that other modifications can be made therein by any person skilled in the art and that it can be applied to the other types of newspaper printing presses without departing from the scope of the invention as expressed in the claims. Therefore we do not wish to be limited in these respects, but what we do claim is:—

1. In a newspaper printing machine, the combination with a plurality of printing couples and means for conducting the webs from said couples, of a drag roller receiving all of said webs upon its surface, said printing couples being located on both sides of the drag roller and a late news printing device located adjacent to the drag roller and adapted to receive a web from a printing couple located on either side of the drag roller.

2. The combination with a newspaper printing machine having a drag roller and former, said machine having printing couples on both sides of the former, of a late news printing device located over the drag roller and adapted for receiving the web from any of the printing couples and delivering it with a late news imprint thereon over the drag roller to the former.

3. In a newspaper printing machine, the combination with a frame for supporting the printing couples, of a drag roller carried by the printing machine frame, a brace extending across the frame adjacent to the drag roller and above it and finished on its upper surface, a sliding frame resting freely at one end on the finished surface of said brace and movable across the machine, a shaft pivotally supporting the other end of said sliding frame, and a late news printing mechanism carried by the sliding frame.

4. In a late news printing device, the combination with inking mechanism and a fudge cylinder adapted to be provided with a printing surface throughout part of its circumference and mounted to move across the printing press to print on any of the sections of the web, and an impression roller mounted to run in contact with the fudge cylinder, the impression roller comprising two parts, one of which has an impression surface extending all the way around it and the other an impression surface extending part way around it for the purpose described.

5. In a late news printing device, the combination with inking mechanism and a printing cylinder provided with a printing surface over part of its circumference and adapted to move across the printing press to print on any of the sections of the web, an impression roller mounted to run in contact with the printing cylinder, a second frame slidable across the frame of the press, and impression rollers carried by the second frame for engaging the printing cylinder,

said impression rollers having different surfaces for enabling the printing couple to produce an imprint at each revolution of the printing cylinder or at a slower rate.

6. In a late news printing device, the combination with a printing press, of a frame mounted to move across the printing press, inking mechanism and a printing cylinder on said frame, a second frame slidable transversely to the press and also relatively to the first frame and having a driving shaft thereon and two impression rollers on said shaft for engagement with the printing cylinder, either one of which is adapted to be moved into registration therewith, one of said impression rollers having an impression surface extending all the way around it and the other, an impression surface extending part way around it for the purpose described.

7. In a late news printing device, the combination of a printing cylinder having a surface less than that of a complete circumference for the reception of linotype slugs to form a printing surface and having a diameter half that of a standard printing cylinder, with an impression roller having a diameter one third of that of a standard printing cylinder and provided with two surfaces one of which is a complete cylindrical impression surface and the other of which has an impression surface extending less than one half way around it so as not to print.

8. The combination with a newspaper printing machine, of a late news device thereon located adjacent to the former of the press and having means whereby it may print on a collected sheet or on a non-collected sheet as may be desired, said means including two impression rollers one adapted for each of said operations and movable axially to bring either one of them into operating position.

9. In a newspaper printing machine, the combination with a plurality of printing couples and means for conducting the webs from said couples, of a frame for supporting the printing couples, a drag roller carried by the printing frame, a brace extending across the frame adjacent to the drag roller and above it, a sliding frame supported on said brace, and movable across the machine, said printing couples being located on both sides of the drag roller, and a late news printing device located adjacent to the drag roller and adapted to receive webs from printing couples located on either side of the drag roller.

10. In a late news printing device, the combination with a plurality of printing couples and means for conducting the webs from said couples, of an inking mechanism and a fudge printing cylinder provided with a printing surface on part only of its circumference and mounted to move across the printing press to print on any of the sections of the web, an impression roller mounted

to run in contact with the fudge cylinder, said printing couples being located on both sides of the fudge cylinder, and means for maintaining the roller and cylinder at the same surface speed and drawing a web
5 through them from printing couples on either side of the fudge cylinder for imprinting thereon.

11. In a late news printing device, the combination with a printing frame, of two
10 braces extending across the frame at a short distance apart, each having a finished surface, two frames, each resting on one of said braces and movable therealong to adjust them to different positions across the
15 web of a newspaper being printed, a shaft extending across the printing machine frame above each of said braces, means for rotating said shafts, a fudge printing cylinder
20 mounted on one of said shafts and an impression cylinder mounted on the other shaft in the said sliding frames respectively, and inking means carried by one of said frames for inking the fudge cylinder.

25 In testimony whereof we have hereunto affixed our signatures.

I. TORNBERG.
HANS C. JORDHOY.

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