

Sept. 11, 1928.

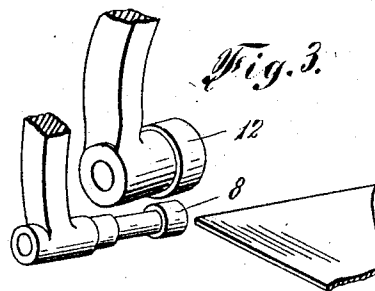
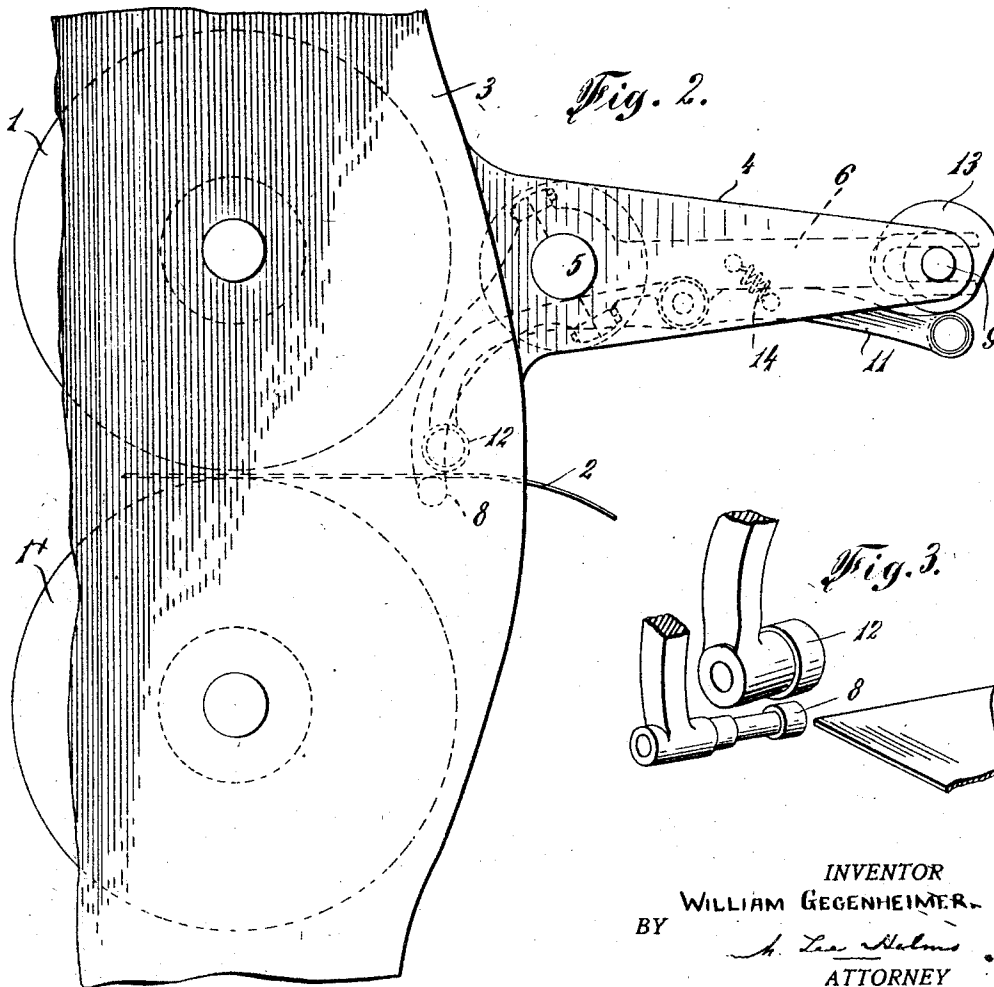
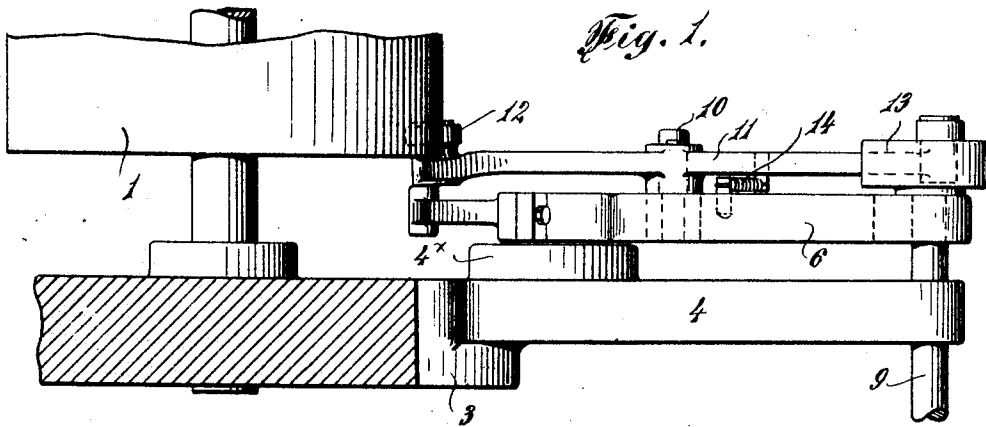
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W. GEGENHEIMER

PAPER FEEDING MEANS FOR PRINTING PRESSES

Filed Feb. 25, 1927

2 Sheets-Sheet 1



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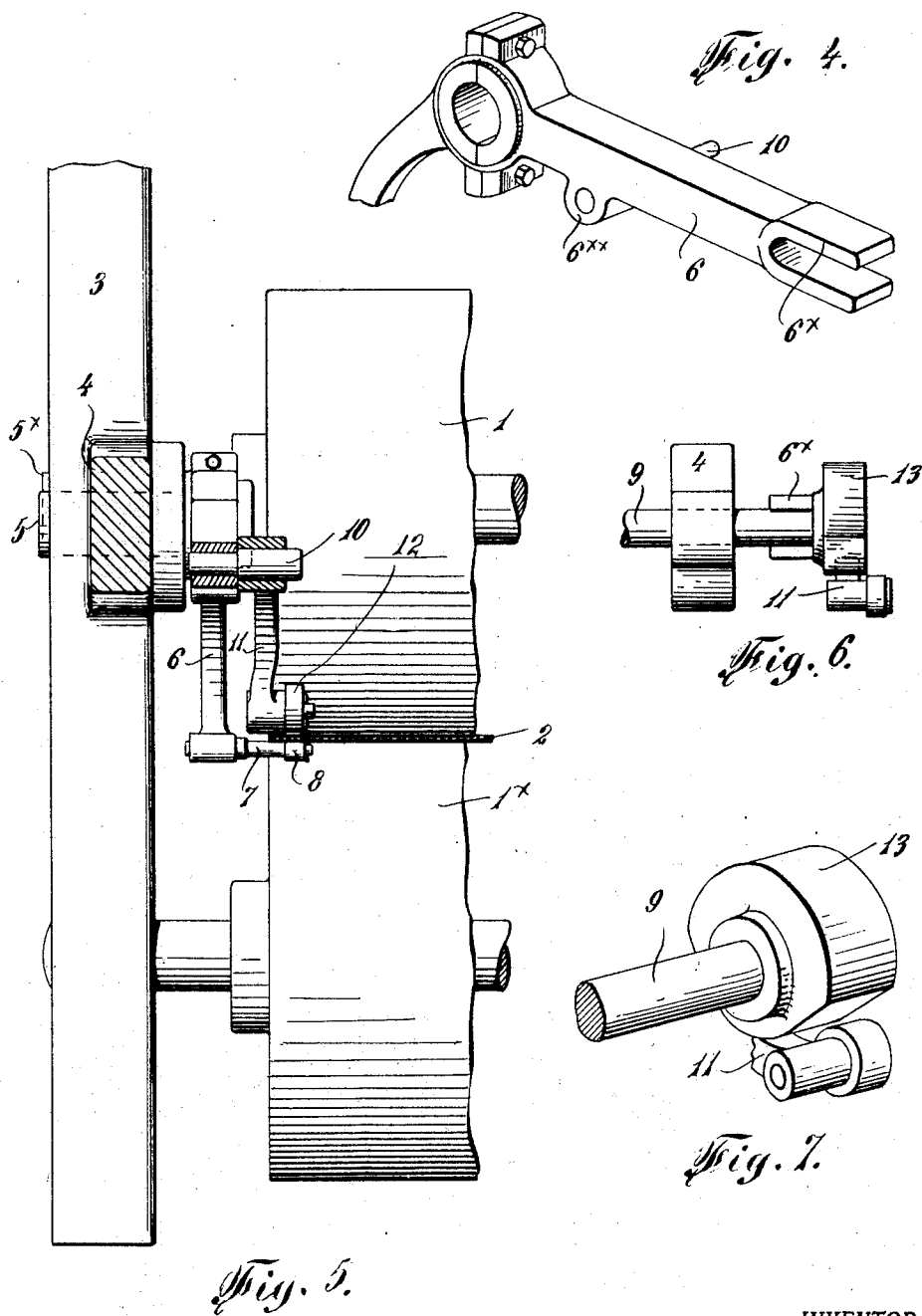
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PAPER FEEDING MEANS FOR PRINTING PRESSES

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UNITED STATES PATENT OFFICE.

WILLIAM GEGENHEIMER, OF BALDWIN, NEW YORK.

PAPER-FEEDING MEANS FOR PRINTING PRESSES.

Application filed February 25, 1927. Serial No. 170,821.

The object of the present invention is to provide means for feeding paper in printing or lithographing presses whereby the paper may be stretched in such manner as to prevent formation of wrinkles. It frequently happens that rolls or sheets of paper absorb moisture along their margins or elsewhere when the paper is rolled or stacked and such sections of the paper sheet or roll expand and become of greater area than the dry and relatively contracted sections. It is the specific object of the present invention to provide means for so feeding sheets of paper as to prevent wrinkling.

The invention will be understood by reference to the accompanying drawings, in which—

Figure 1 is a sectional plan view showing an embodiment of the invention applied to a printing press of the cylinder type;

Figure 2 is a view in elevation of the same;

Figure 3 is an enlarged sectional detail view of one set of the paper stretching rolls;

Figure 4 is a detail perspective view of the supporting and operating lever for the lower stretching roll;

Figure 5 is a sectional front elevation of the improvements applied to a cylinder press;

Figure 6 is a detail front elevation of the cam shaft together with its supporting and associated elements;

Figure 7 is a perspective view of the operating cam and cam lever.

Referring to Figure 2 of the drawings, 1, 1* indicate printing cylinders of a press and 2 indicates a sheet of paper passing through the press by the rotation of the said cylinders. Projecting forwardly of the press frame member 3 is an arm 4 having a boss 4* apertured to receive a stud shaft 5 which is held against endwise movement inwardly by a pin or other means 5* (Figure 5). Mounted on a shaft 5 is a lever 6 which at its end carries a shaft 7 upon which is mounted a roll 8. The front end of the shaft is forked at 6* to embrace a cam shaft 9 supported by arm 4. Lever arm 6 is formed with a boss 6** in which is mounted a lateral projecting stud shaft 10. And mounted to rock upon shaft 10 is a rock lever 11 carrying at one end a roll 12 and at its opposite end being held in contact with a cam 13 by means of a spring 14, one end of the spring being

connected to lever 6 and the opposite end to the rock arm 11 in such manner that the roll 12 is moved toward roll 8 under spring tension.

By reference to Figure 3 it will be noted that roll 12 is shown as mounted on a shaft set at an angle relatively to the shaft for roll 8. In other words, shaft 12 is "toed out" toward the margin of the paper as the latter is fed through the press and thus side pull is created on the sheet, stretching the paper so that it passes into the press perfectly flat, it being understood that the stretching device described above at one side of the press is duplicated at the opposite side of the press, both side margins of the paper being acted upon.

In the operation of the device, the rolls 8 and 12 are rotated through friction imposed upon them by the sheet 2 in its passage between the printing rolls. Cam 13 periodically acts upon the rock lever 6 and lever 11 to separate the rolls and permit the passage of a new sheet between them and into position to be engaged by the printing rolls. The side pull of one device on one margin of the paper is duplicated by the second device on the opposite margin and the paper is thus held taut.

The pressure of the rolls for the sheet may be modified by changing the tension of spring 14. It will also be understood that one of the rolls may be eliminated where a support or contact member for the sheet is placed on the opposite side of the roll which is retained.

Inasmuch as the fundamental idea of the invention is to provide means for automatically stretching the sheet laterally during its passage between the printing rolls, it will be understood that various modifications may be made in the embodiment of the invention illustrated in the drawings without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent being as follows:—

1. In feeding devices for printing presses, a support, a lever pivotally mounted on said support and carrying a roll for engagement with one marginal surface of a sheet, a rock lever provided with a roll for engagement with the opposite face of the sheet, a spring acting upon the levers to move said rolls toward each other and a cam periodically acting upon said levers to separate the rolls,

one of the rolls being held at an angle to the marginal line of the sheet.

2. In combination with a printing press, including means for feeding a sheet there-
3 through, a roll for a side margin of the sheet and adapted to engage the latter and to be rotated by frictional contact therewith, the

roll being disposed at an angle relatively to the marginal line of the sheet, and means for periodically moving the roll in a direc- 10
tion away from the sheet.

In testimony whereof, I have signed my name to this specification.

WILLIAM GEGENHEIMER.