

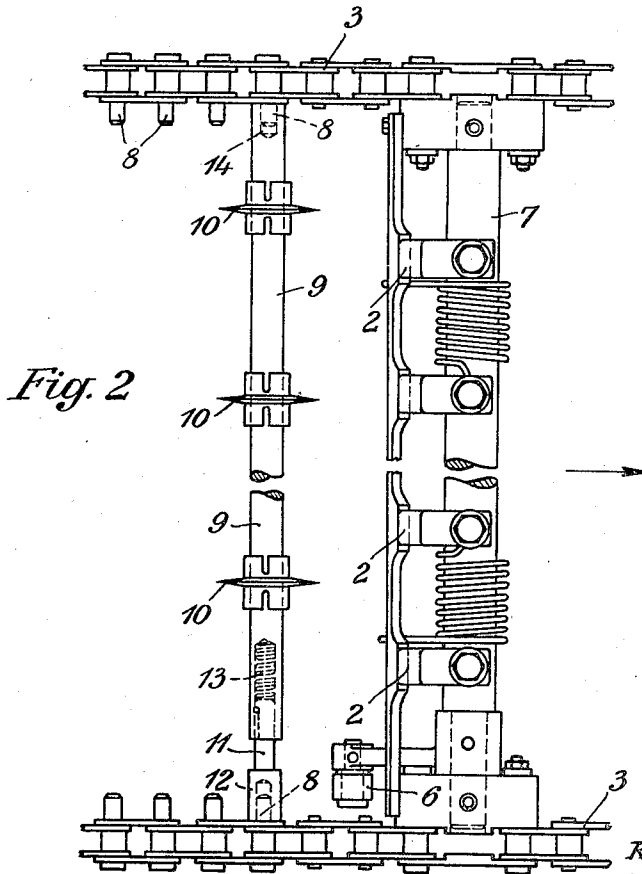
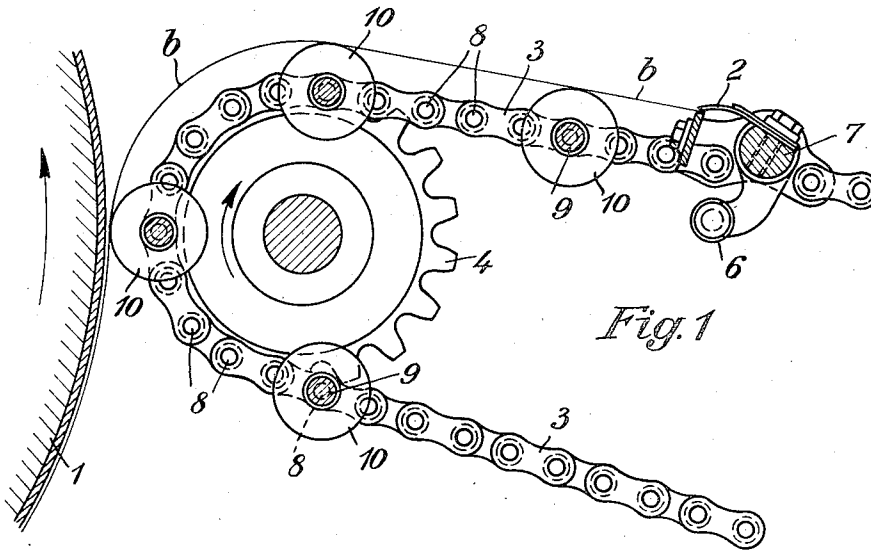
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SHEET DELIVERY DEVICE FOR CYLINDER PRINTING PRESSES

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SHEET DELIVERY DEVICE FOR CYLINDER
PRINTING PRESSESRudolf Stüssi, Glarus, Switzerland, assignor to
Druckmaschinen Aktiengesellschaft, Glarus,
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1 Claim. (Cl. 271—79)

Among the known devices for delivering the sheets from cylinder printing presses there are such constructional forms in which the printed sheets are taken off from the impression cylinder by means of either continually or periodically circulating chain grippers by which the sheets are then further conveyed.

For supporting the sheets during the leading-out action those known devices are equipped with disks adjustable in the transverse direction of the sheets so as to render possible adjusting said disks to such places of the sheets where there is no printed matter. If no such places exist, the disks come in contact with printed matter and it may be that portions thereof are monked and obliterated.

The object of the present invention is to obviate said drawback, and I attain the purpose in view by connecting the said disks, or equivalent members, with the chains in such a manner that they can be adjusted in the transverse direction as well as in the longitudinal direction of the sheet whereby it is rendered possible in the simplest manner to make the disks contact with the sheets always where there is no printed matter.

It is suited to the purpose in view to connect the disk supporting axles and the chains with one another in such a manner that said axles can be detached from the chains and attached to other portions of them, as best suited for said purpose. The chains may have supporting pivots for said axles so as to render possible to give the axles other positions whereby also the position of the disks in the longitudinal direction of the sheets can be varied. The disks can, however, nevertheless be shifted also transversely with respect to the sheets, as required.

The invention is illustrated diagrammatically and by way of example on the accompanying drawing in which Figure 1 is a side-view of the arrangement and combination of parts constituting the invention, and Figure 2 is a plan of the same.

On the drawing, *b* is a printed sheet which has been taken off from the impression cylinder 1 by means of the grippers 2 that are connected with two chains 3 traveling either continually or periodically. Only a part of one of the chains is shown in Fig. 1, whereas in Fig. 2 portions of both chains are shown. The chains run over chain wheels 4 (Fig. 1).

The grippers are attached to a transverse rod 7 which is connected with the chains 3. When the rod 7 with the grippers 2 arrives at the other

end of the chains, i. e. counter to the cylinder 1, the grippers are opened in known manner by abutment members (not shown) which open the grippers by the intermediary of a roller 6, the sheets being released from the grippers and being piled up in known manner. I have abstained from showing the members located at the other end of the chains, as they do not form parts of the present invention.

Certain of the pintles connecting the chain links with one another are extended inwardly, forming there pivots 8 upon which the axles 9 carrying the supporting disks 10 for the sheets are supported. The disks 10 are axially shiftable in known manner upon said axles, and these latter can be detached from the pivots 8 supporting them at the time being, and can be attached to other pivots whereby the position of the disks 10 can be varied in the longitudinal direction of the sheets, as requisite for the purpose in view.

In order to render possible detaching the axles 9 from the pivots 8, and attaching them thereto, every axle 9 has at one end an axial bore in which a bolt 11 can be shifted. The outer end of each bolt 11 is provided with a sleeve 12 which can receive in it any one of the pivots 8, as appears from the lower portion of Fig. 2. The respective pivot and the respective sleeve are kept in engagement with one another by means of a helical compressive spring 13 inserted into the respective bore. Also the other end of each axle 9 is provided with a bore 14, (Fig. 2) receiving one of the pivots 8. It is obvious that any one of said axles 9 can be disconnected from the chains 3, or from the respective pivots 8 respectively, either by shifting the axle 9 concerned towards the appertaining sleeve 12 or by shifting this sleeve 12 towards the appertaining axle 9 when in either case the respective spring 13 will be compressed so as to permit detaching the axle from the chains.

I wish it to be understood that I do not limit myself to the constructional form illustrated in the drawing merely by way of example. Various modifications all lying within the scope of the invention are possible.

I claim:

A sheet delivery device for cylinder printing presses, comprising, in combination with two endless chains, means for driving said chains, grippers connected to said chains and adapted to seize a printed sheet, pivots on said chains and projecting inwardly, transverse bars of less length than the space between said two chains, an axial

bore at each end of said transverse bars, one of said bores adapted to engage a pivot of one of said chains, a bolt shiftable in the other of said bores and having a sleeve adapted to engage a pivot of the other chain, and a spring in the last said bore adapted to hold the transverse bar in engagement with the two pivots, supporting discs

for the printed sheet on said bars, said discs being axially shiftable on said bars and adapted to support the printed sheet at places free from printing by displacing said bars in the direction of movement of the chains and by shifting said discs transversely to the direction of the chains. 5

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