

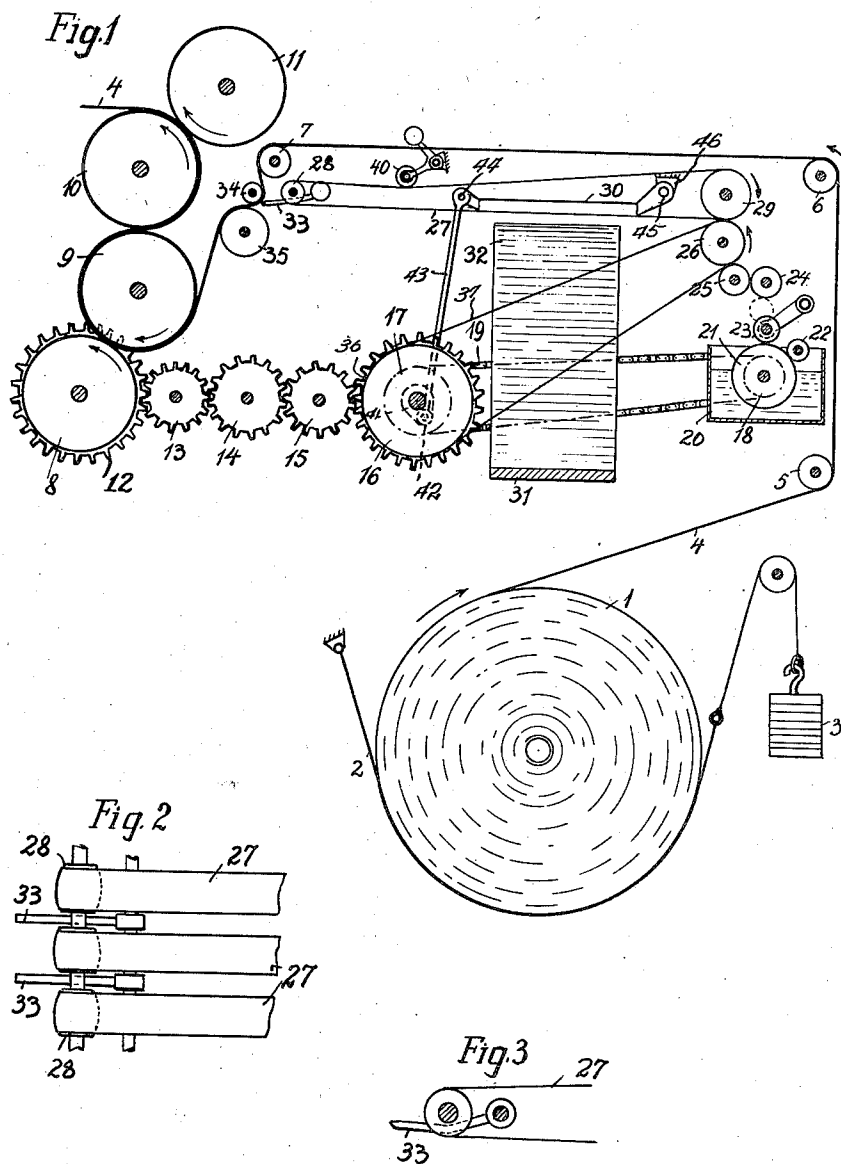
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A. SATTLER

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PRINTING AND FURNISHING SYSTEM

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Inventor:  
Alexander Sattler  
By *Thos. Anderson* atty.

## UNITED STATES PATENT OFFICE

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## PRINTING AND FURNISHING SYSTEM

Alexander Sattler, Brux, Czechoslovakia

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2 Claims. (Cl. 270—18)

The object of my invention is to provide means for automatically furnishing webs capable to be converted to newspapers, with articles as additional sheets or illustrating pictures, labels, samples, advertising bills or the like.

The invention is particularly adapted for the use of printers employing rotary printing presses.

The further object of the invention is to affix said articles made adhesive by paste-carrying means to a web forwarded with the speed of rotary printing cylinders printing said web on one or both surfaces.

My invention contemplates the use of a system for printing web and furnishing it with labels continuously in combination of a printing machine or rotary press with a device receiving said labels from a stack and supplying them to the web without interrupting the printing of said web.

In the accompanying drawing:—Figure 1 is a sectional view through the entire machine; Fig. 2 is a top view illustrating a detail on a larger scale; and Fig. 3 is a side view of said detail.

A web-reel 1 rotatably mounted is partly embraced by a brake band 2 which is connected with a weight 3 tending to press said brake band against a circumferential portion of the web-reel. The web 4 is fed from the reel across rollers 5, 6, 7, 34, 35, 9, and 10 to printing cylinders 8 and 11. The printing cylinder 8 serves for printing one surface of the web, and the cylinder 11 serves for printing the other surface of said web.

The mechanism for advancing the web 4 comprises the shaft of said printing cylinder 8 journaled in bearings not shown and operating a toothed wheel 12 secured on said shaft and advancing a toothed wheel 16 by means of intermediate gear wheels 13, 14, and 15. The shaft of the wheel 16 is provided with a sprocket wheel 17 from which a chain 19 extends to a sprocket-wheel 18 arranged on the shaft of a paste-applying device.

The paste-applying device comprises a paste-trough 20, a paste-feeding roller 21 rotatably mounted within said paste-trough 20, a paste-distributing roller 22 adjacent to said feeding roller and a group of paste transmitting rollers 23, 24, 25, 26 cooperating with an endless transporting band or belt 27 extending from a pulley 29 to a pulley 28. The pulleys 28 and 29 serve to forward the belt 27 at the same speed at which the web 4 is passing the surface of the printing cylinders. Suitable means are provided, by which the belt is operated dependently of the printing cylinders. For example, the means comprise a pulley 36 which is attached to the shaft of the wheel

16 and is equal in diameter to the cylinder 8. At 37 is indicated a belt traveling over the pulley 36 and over a pulley which is attached to the shaft of the roller 26. This belt 37 may drive the roller 26 at the same surface speed as that at which the cylinder 8 has moved, and this roller 26 may produce by its friction the rotation of the belts 27. The lower trace of said band or belt 27 passes between a vertically reciprocating plate 30 and a stack 32 of sheets, samples or bills arranged one above another. The stack 32 of sheets is carried by a plate 31. In the constructional embodiment of the invention represented in the drawing a plurality of belts 27 spaced from another and extended from a plurality of pulleys 23 to a plurality of pulleys 29.

To the hub of the wheel 17 is attached a crank 41 and a crank pin 42 connected by a link 43 to a pin 44 secured at one terminal portion of the plate 30 the other terminal portion of which carries a pin 45 bearing in a bracket 46. This means is provided for depressing the plate periodically in timed relation with the printing mechanism 8, 9, 10, 11.

The plate 30 is reciprocated to depress the belts 27 against the uppermost sheet of the stack and to cause said belt to make adhesive and to forward said sheet. A belt-tightening pulley 40 is provided.

When the printing machine is operated, the web 4 runs from the web-reel 1 across the rollers 5, 6, 7, 34, 35, 9, and 10 and will be printed on both surfaces by means of the printing cylinders 8 and 11 respectively. The roller 21 is rotated by the chain 19 operated by the shaft of the printing machine and will be covered with paste. The roller 22 distributes the paste across the roller 21 thereby refusing a surplus of paste. Preferably the roller 22 may be adjustably arranged.

The roller 23 is journaled at an arm attached to a shaft by which a tilting movement is rendered to said arm for moving the roller 23 alternately toward the pasting rollers 21 and 24. At this tilting movement the roller 23 transmits paste from the roller 21 to the roller 24, which coats the bottom face of the belts 27 with adhesive. The belts 27 made adhesive by the paste transmitted are depressed upon the uppermost sheet of the stack 32 for receiving said sheet. A stripper comprising guiding fingers 33 is arranged between the belt 27 and the sheet receiving roller 35. The belt 27 transposes said enclosure along said guiding fingers 33 upon a predetermined portion of the paper 4, therefore the speed of the roller 28 and 29 is chosen to accom-

modate it to the speed of the web 4 travelling above the surfaces of the printing cylinders 8 and 11. When the web 4 is furnished with the sheets or other articles, it may be folded and divided 5 in usual manner.

Having thus described the invention what I claim as new and desire to obtain by Letters Patent is:

1. In a rotary web printing press, the combination of the mechanism for driving the rotary printing cylinders with a sheet pasting and feeding belt, rollers arranged with their shafts in stationary bearings and carrying said belt travelling at the same speed as the surface of said printing cylinders, a device for pasting said belt, a gear meshing with a wheel of said printing cylinders to cooperate with said device of pasting, a support carrying a stack of sheets, belt guiding means arranged between the said rollers to depress said belt in respect to said stack for transferring its topmost sheet to said belt, a pathway 10 15 20

for a web guided by said printing cylinders, and means for guiding said sheets to said pathway.

2. In a rotary web printing press, the combination of the mechanism for driving the rotary printing cylinders with a plurality of sheet pasting and feeding belts spaced from another, rollers arranged with their shafts in stationary bearings and carrying said belts travelling at the same speed as said printing cylinders, a device for pasting said belts, a gear meshing with a wheel of said printing cylinders to cooperate with the latter device, a support carrying a stack of sheets, a belt guiding plate arranged between said rollers to depress said belts in respect to said stack for transferring its topmost sheet to said belts, a pathway for a web transported by said printing cylinders, and stripping means arranged at the level of and spaced laterally from said belts for stripping said sheets to guide them to said pathway. 5 10 15 20

ALEXANDER SATTLER.