

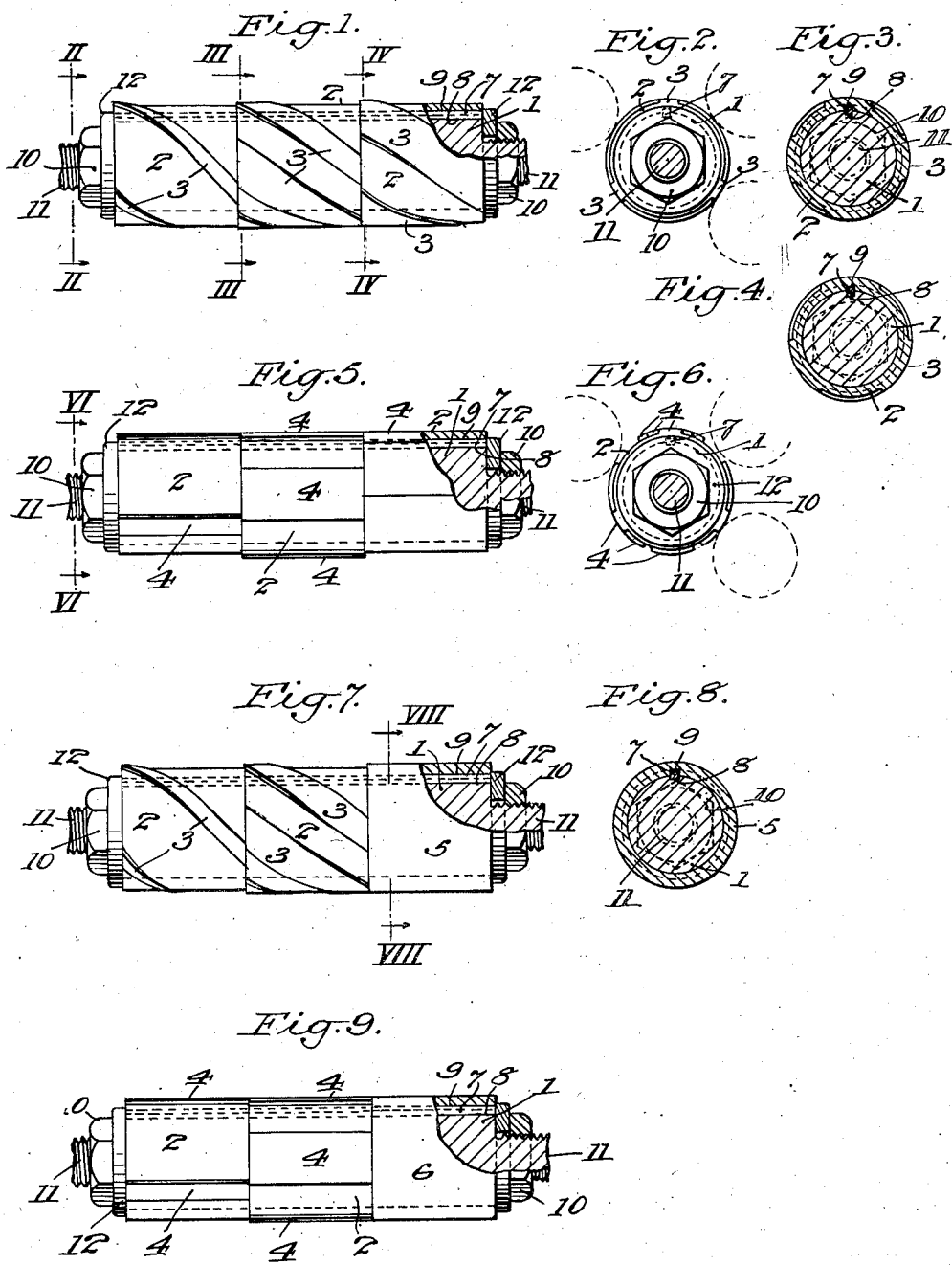
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TRANSFER ROLLER FOR INK DISTRIBUTIONS

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TRANSFER ROLLER FOR INK DISTRIBUTIONS

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In high speed printing it is desirable that the ink should be applied in the required predetermined amounts to the printing cylinder of a rotary printing press according to the rotative speed of the printing cylinder and according to the character of the product to be printed and without changing the flow of the ink from the fountain.

The object of my invention is to provide simple and effective means in the ink distribution for ensuring the right quantity of ink to be applied along the printing cylinder, which means includes, generally, an ink transfer roller located in the low speed portion of the ink distribution, said ink transfer cylinder being provided with ink transfer surfaces of predetermined areas, some or all of which surfaces may be raised.

My invention includes, in one instance, a sectional ink transfer roller in which all of the sections are provided with one or more ribs having ink transfer surfaces of different areas, and, in other instances, a sectional ink transfer roller in which one or more of the sections will be provided with continuous transfer surfaces.

My invention more particularly includes a sectional ink transfer roller comprising a cylindrical core and a plurality of sleeves removably mounted end to end thereon, all or certain of the sleeves having ribs of varying widths according to the character of the printed product arranged in different relative positions along the roller; or certain of the sleeves having continuous ink transfer surfaces, according to where greater or lesser quantities of ink are to be applied to the printing cylinder.

Practical embodiments of this invention are represented in the accompanying drawing in which Fig. 1 represents a side elevation, partly in section, of one form of ink transfer roller. Fig. 2 represents a cross section taken in the plane of the line II—II of Fig. 1 looking in the direction of the arrows. Fig. 3 represents a cross section taken in the plane of the line III—III of Fig. 1 looking in the direction of the arrows. Fig. 4 represents a cross section taken in the plane of the line IV—IV of Fig. 1 looking in the direction of the arrows. Fig. 5 represents a side view, partly in section, of a second form of ink transfer roller. Fig. 6 represents a cross section taken in the plane of the line VI—VI of Fig. 5. Fig. 7 represents a side elevation of a third form of sectional ink transfer roller in which two of the sections are shown as having spiral ribs of different areas and a third section as having a

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continuous transfer surface. Fig. 8 represents a cross section taken in the plane of the line VIII—VIII of Fig. 7 looking in the direction of the arrows. Fig. 9 represents a side elevation of a fourth form of sectional ink transfer roller in which two of the sections are shown as having straight ribs provided with ink transfer surfaces of different areas and a third section as having a continuous transfer surface.

The sectional ink transfer rollers are provided with raised and continuous ink transfer surfaces of predetermined areas so as to transfer different predetermined amounts of ink in the ink distribution. These ink transfers may be made in various forms.

In Fig. 1 I have shown the sectional transfer roller as comprising a cylindrical core 1 on which three sleeves 2 are removably mounted end to end in the desired relationship. These sleeves 2 are provided with annular series of spiral ribs 3 of different predetermined widths varying from a quite narrow width to a quite wide width. In Fig. 5 the sleeves 2 are provided with annular series of straight ribs 4 of different predetermined widths. In Fig. 7 a sectional ink transfer roller is shown as comprising two sleeves 2 provided with annular series of spiral ribs having their ink transfer surfaces of different predetermined widths and a third sleeve 5 having a continuous transfer surface. In Fig. 9 the sectional ink transfer roller is shown as comprising two sleeves 2 provided with annular series of straight ribs having their ink transfer surfaces of different predetermined widths and a third sleeve 6 having a continuous ink transfer surface.

It is to be understood that the sleeves on these ink transfer rollers may be arranged in any predetermined relationship to ensure the proper distribution of ink according to the printing requirements. These sleeves may be splined on the core 1 by a feather and groove connection 7, 8 and 9 to prevent circumferential displacement thereon.

The means which I have shown for preventing endwise displacement of the sleeves is shown as comprising nuts 10 threaded on the roller shafts 11; overlapping collars 12 being located between the nuts and the sleeves.

By the use of the ink transfer rollers constructed as hereinabove set forth for regulating the supply of ink between very wide limits independently of the ink supply, I am enabled to obtain in high speed presses a very superior grade of printing.

This application is a division of my copending application filed June 11, 1942, Serial Number 446,600, Ink distribution for rotary printing presses.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention, and hence I do not intend to be limited to the particular embodiments herein shown and described, but what I claim is:

1. An ink transfer roller divided transversely into a plurality of removable sections, one section being provided with an annular series of straight ribs of a predetermined width extending lengthwise thereof and another section being provided with an annular series of straight ribs of a different width extending lengthwise thereof.

2. An ink transfer roller divided transversely into a plurality of removable sections, one section being provided with an annular series of ribs of a predetermined width, another section being

provided with an annular series of ribs of a different width and still another section being provided with a ribless continuous ink transfer surface.

3. An ink transfer roller divided transversely into a plurality of removable sections, one section being provided with an annular series of spiral ribs of a predetermined width, another section being provided with an annular series of spiral ribs of a different width and still another section being provided with a ribless continuous ink transfer surface.

4. An ink transfer roller provided transversely into a plurality of removable sections, one section being provided with an annular series of straight ribs of a predetermined width extending lengthwise thereof, another section being provided with an annular series of straight ribs of a different width extending lengthwise thereof and still another section being provided with a ribless continuous ink transfer surface.

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