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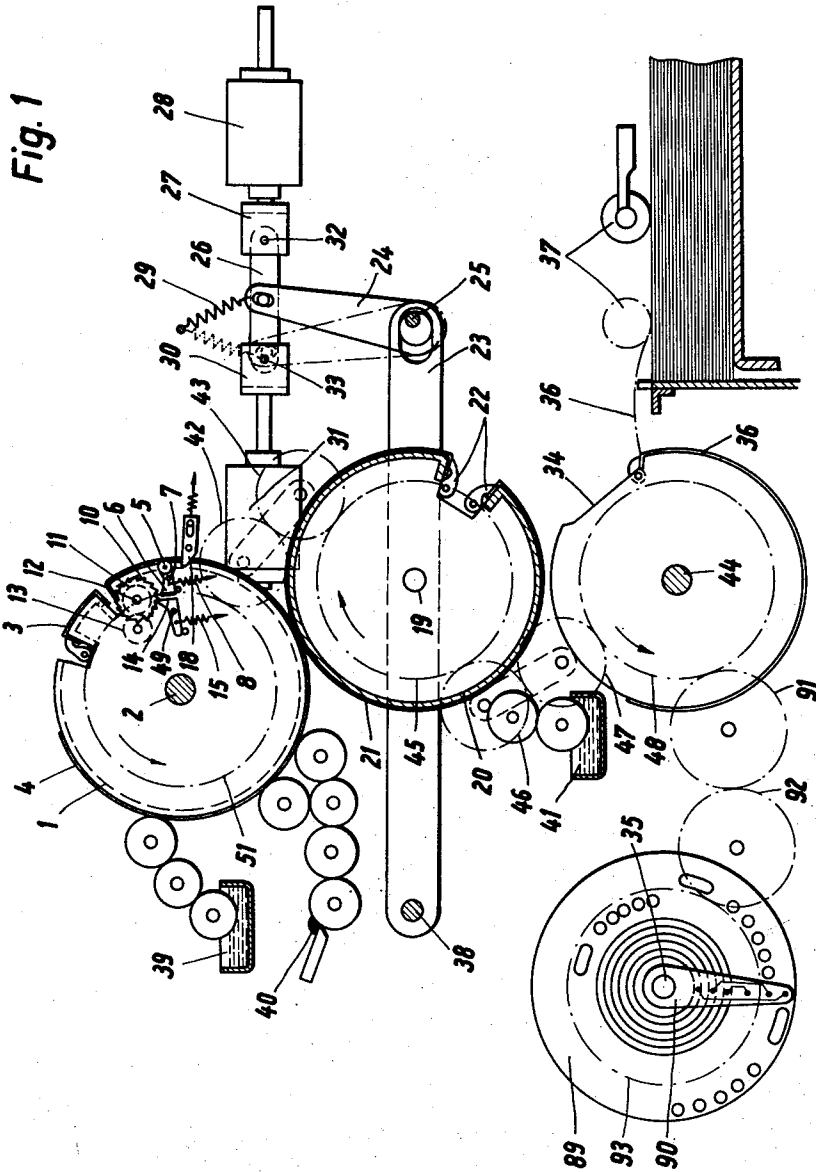
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3,146,705

ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

Filed Dec. 17, 1962

12 Sheets-Sheet 1



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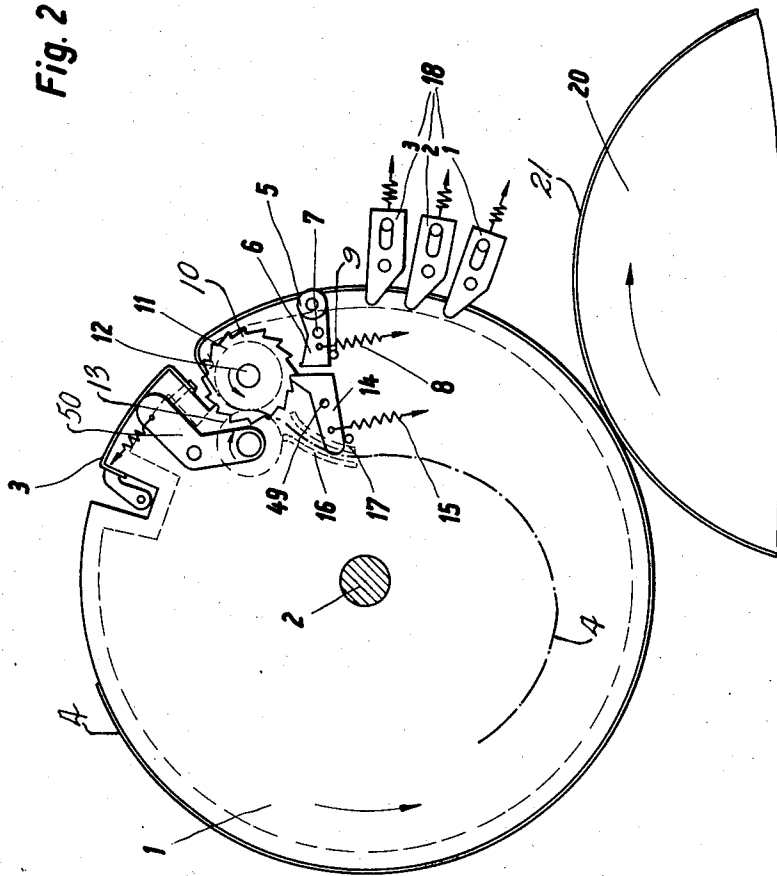
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 2

Fig. 2



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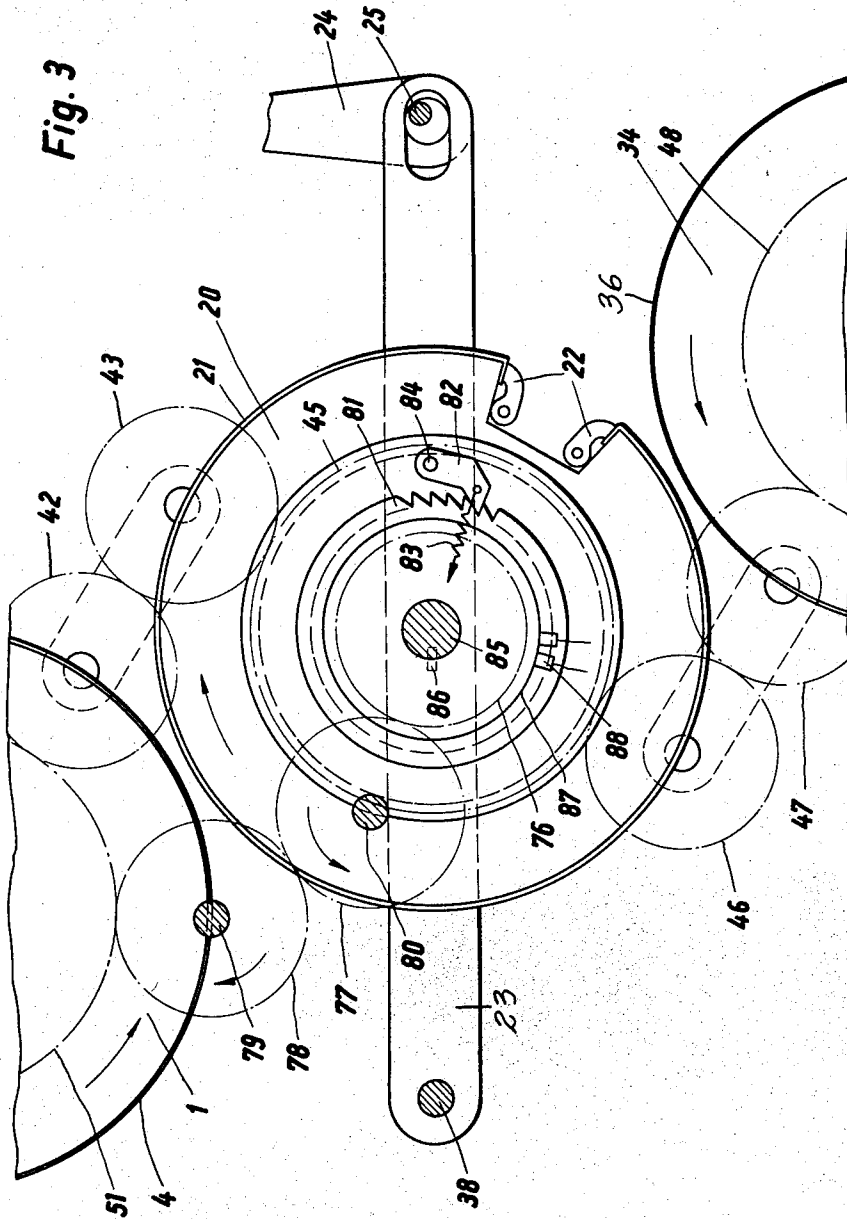
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 3



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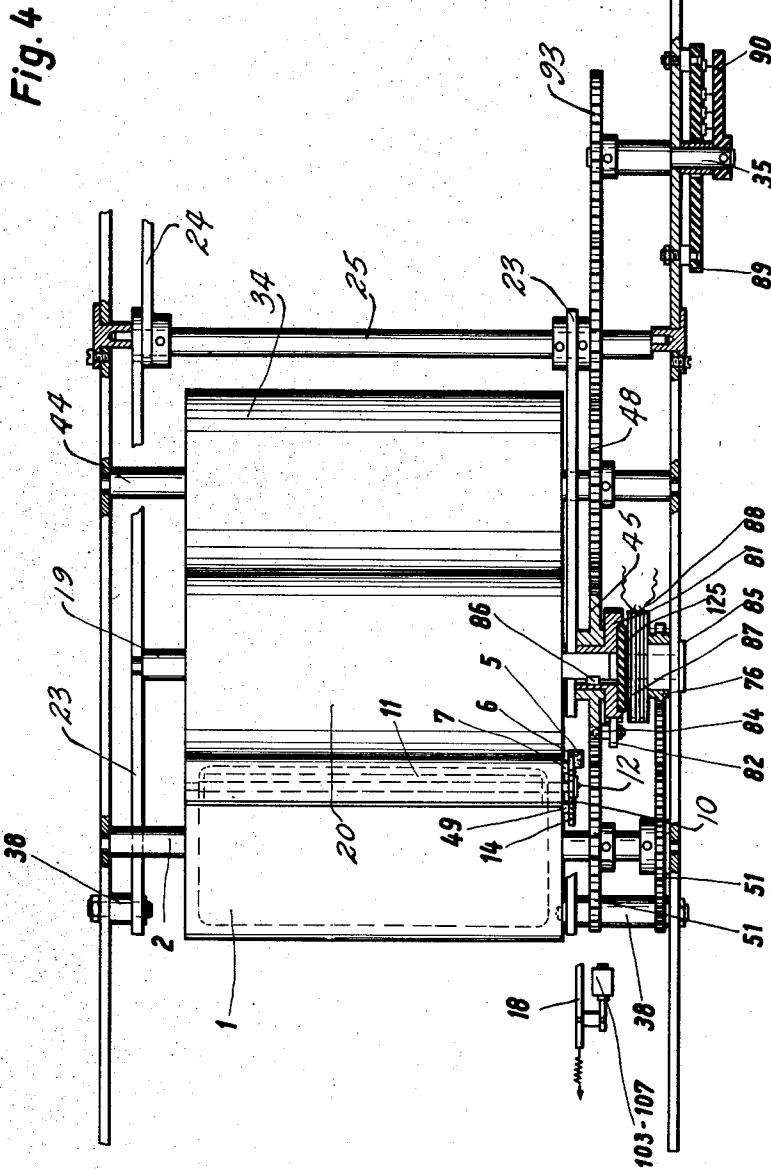
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 4



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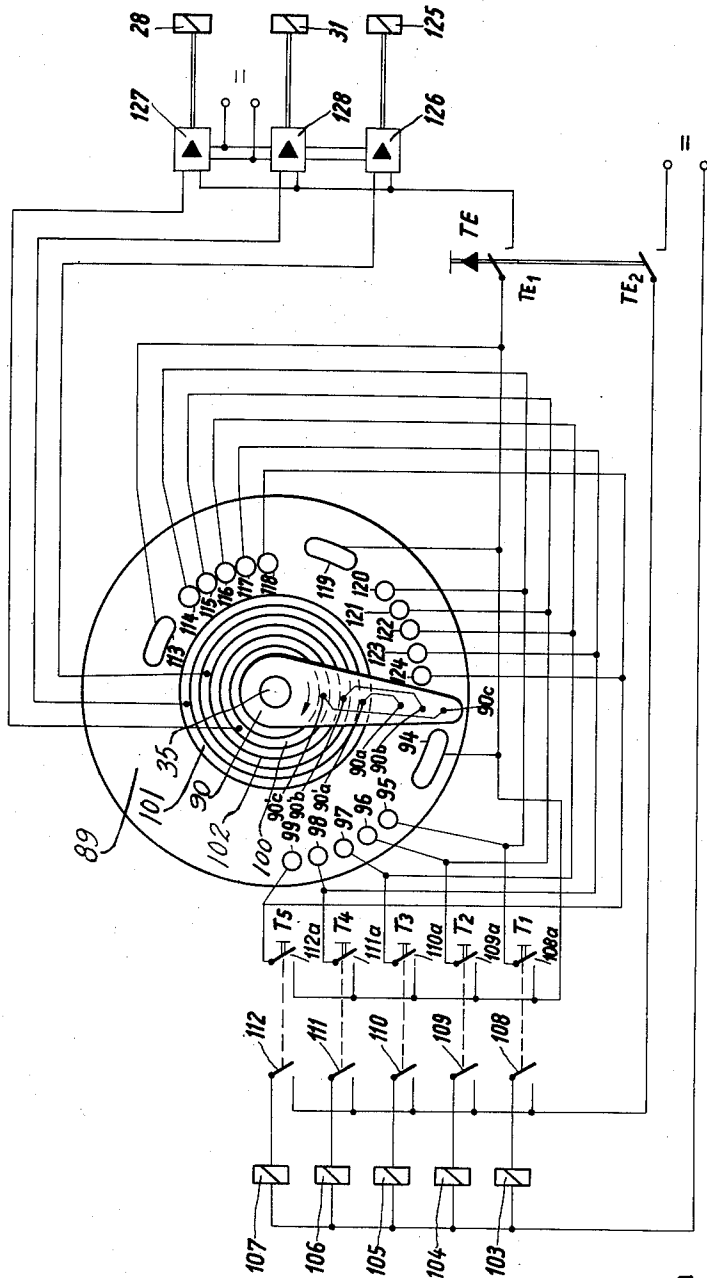
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 5

Fig. 5



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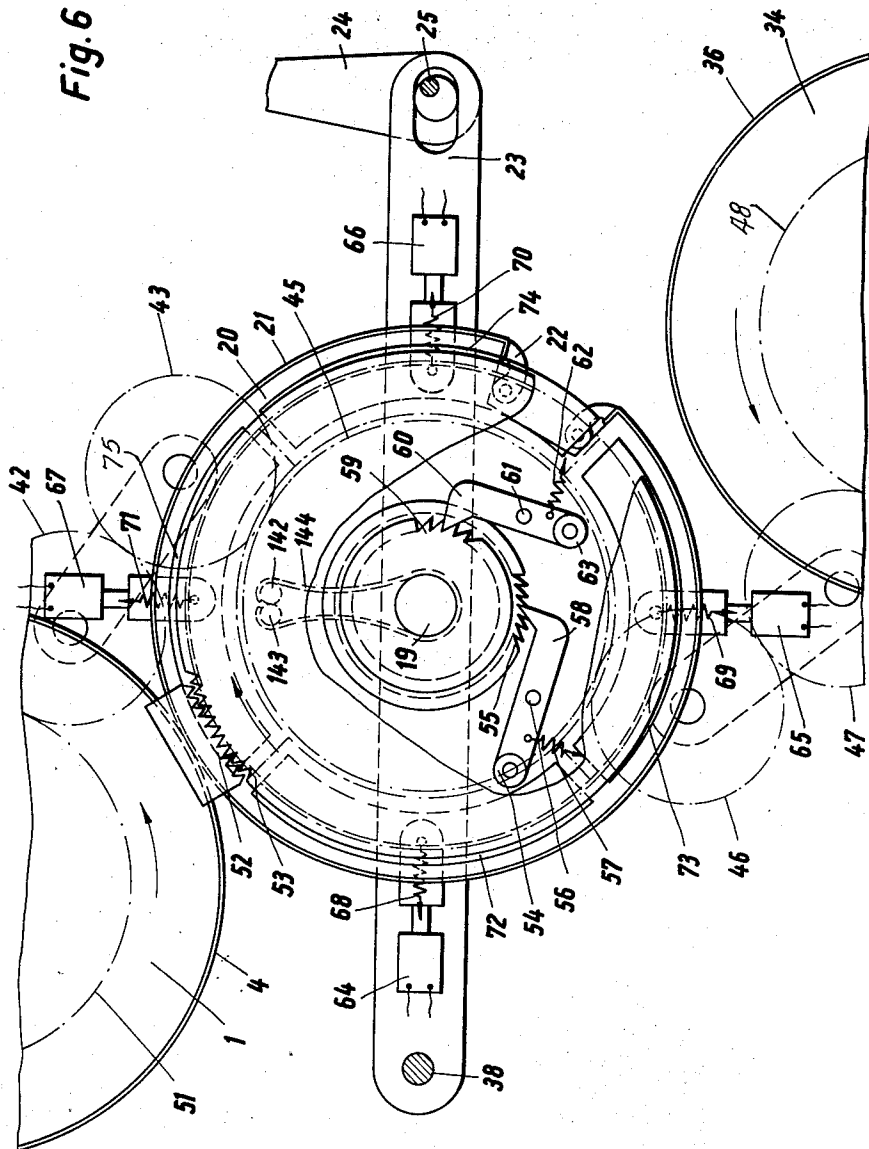
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 6



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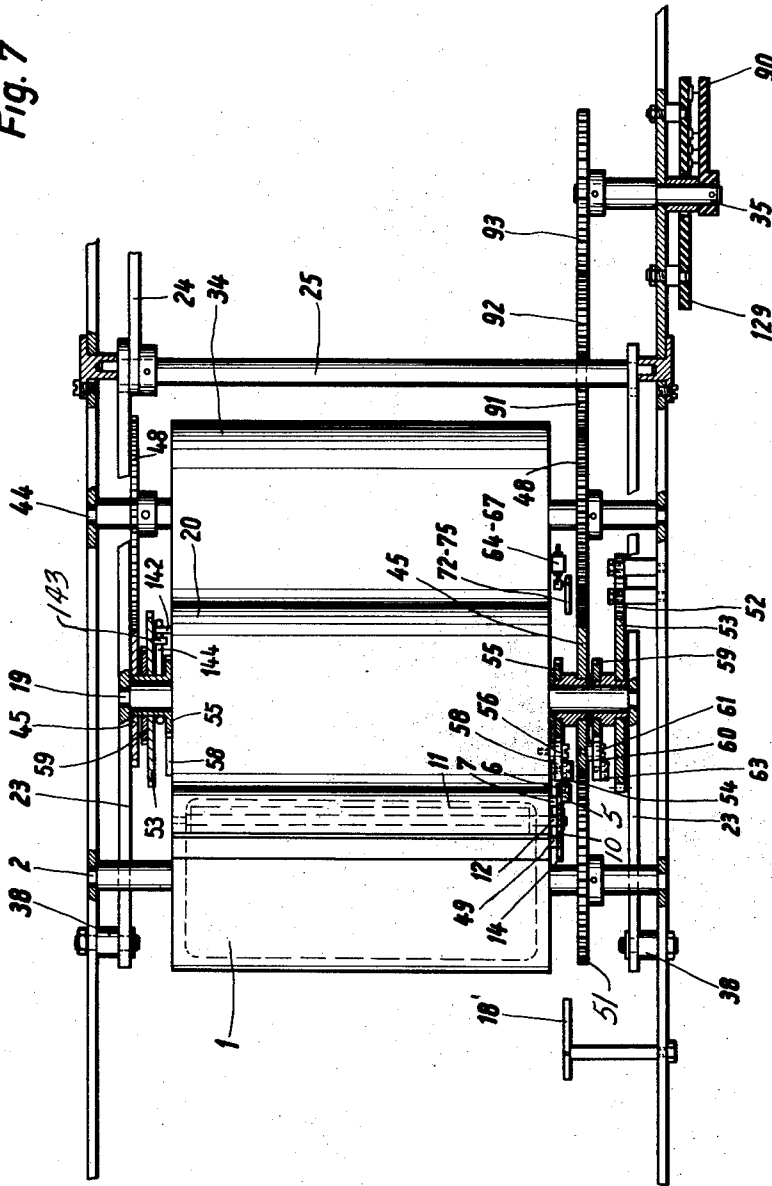
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 7

Fig. 7



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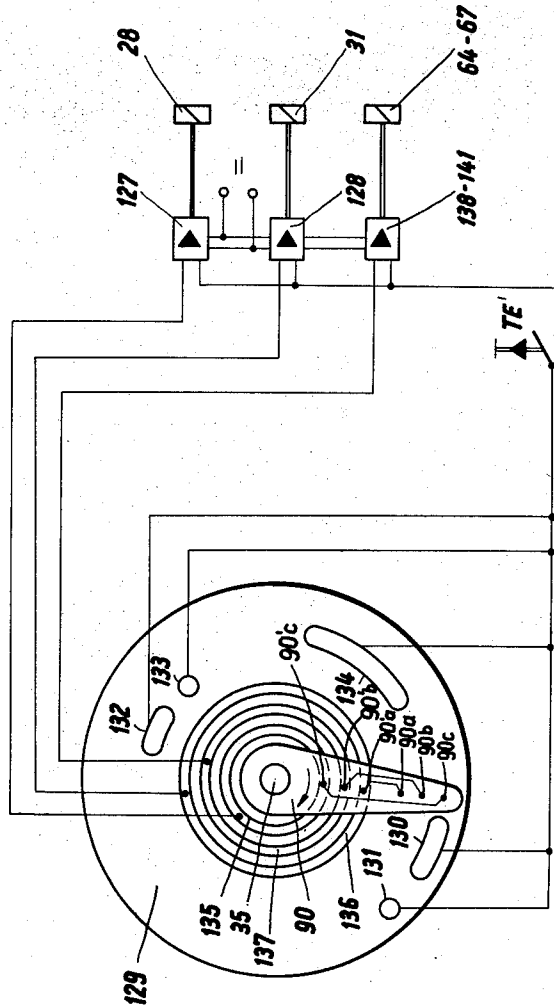
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 8

Fig. 8



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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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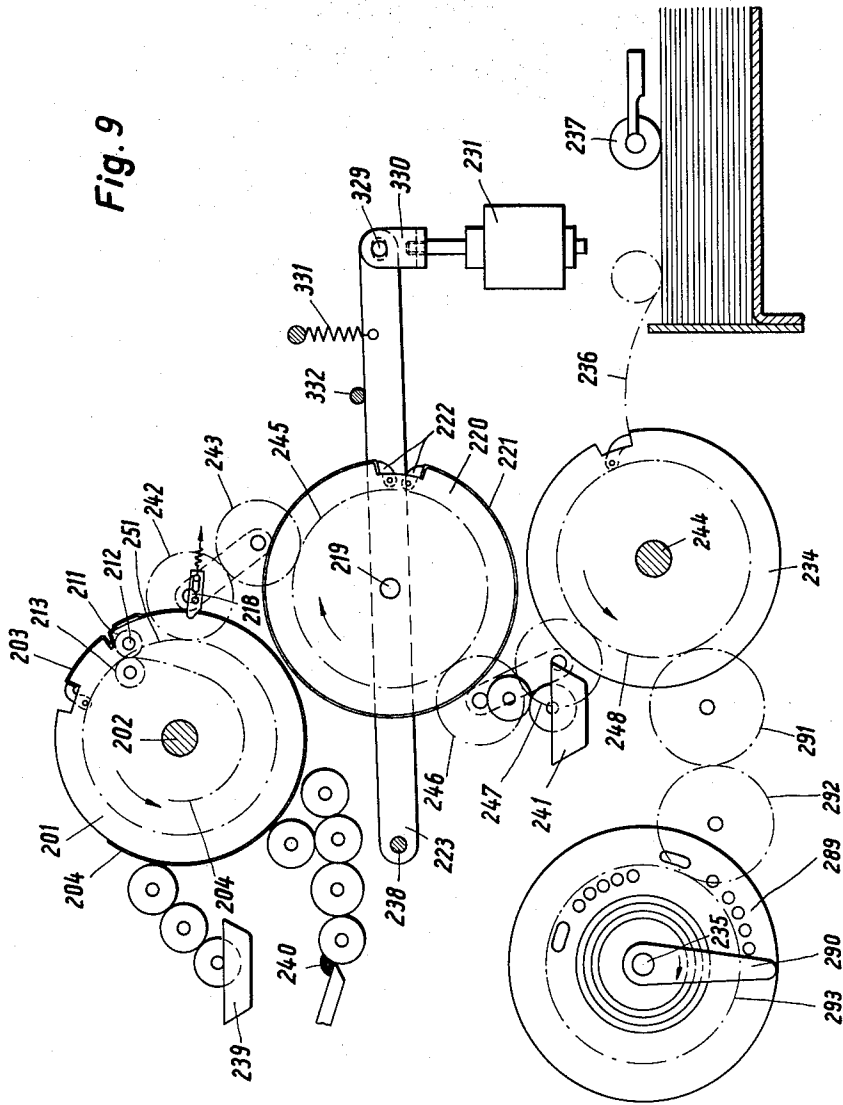


Fig. 9

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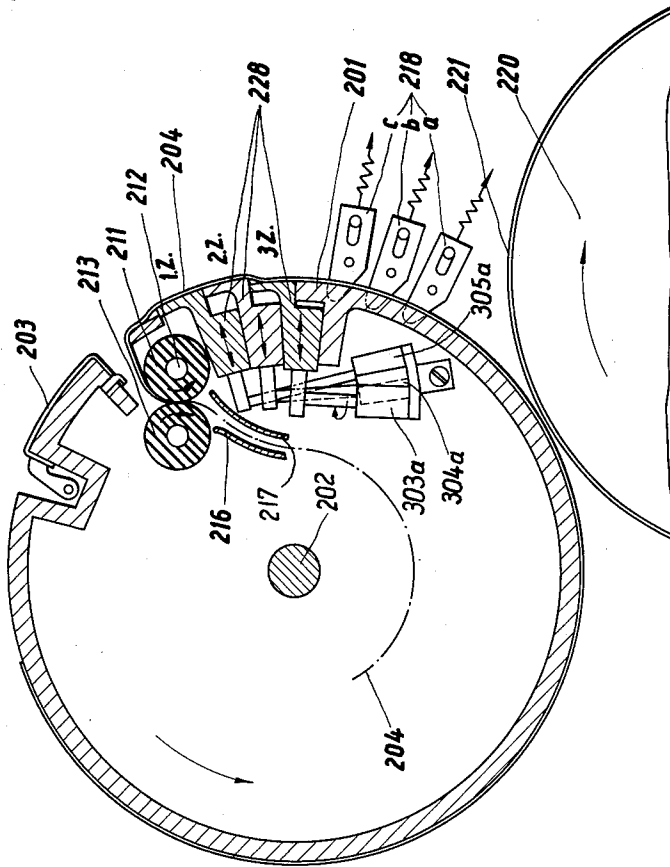
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 10

Fig. 10



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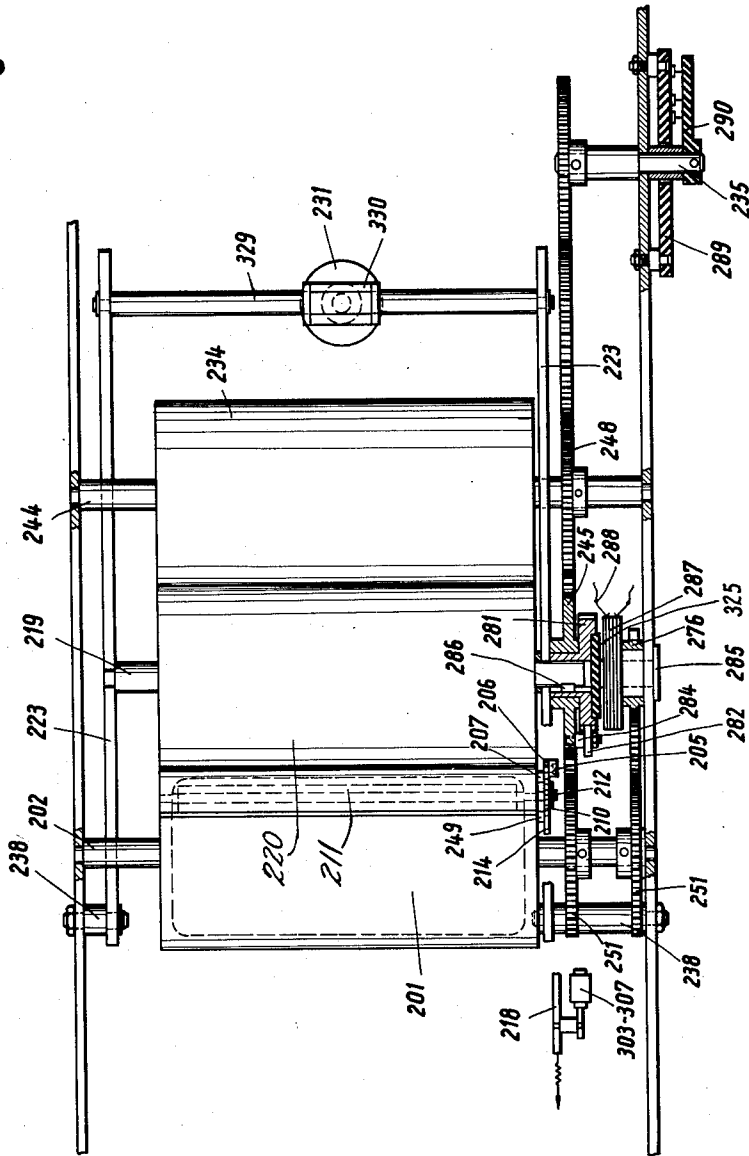
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 11

Fig. 11



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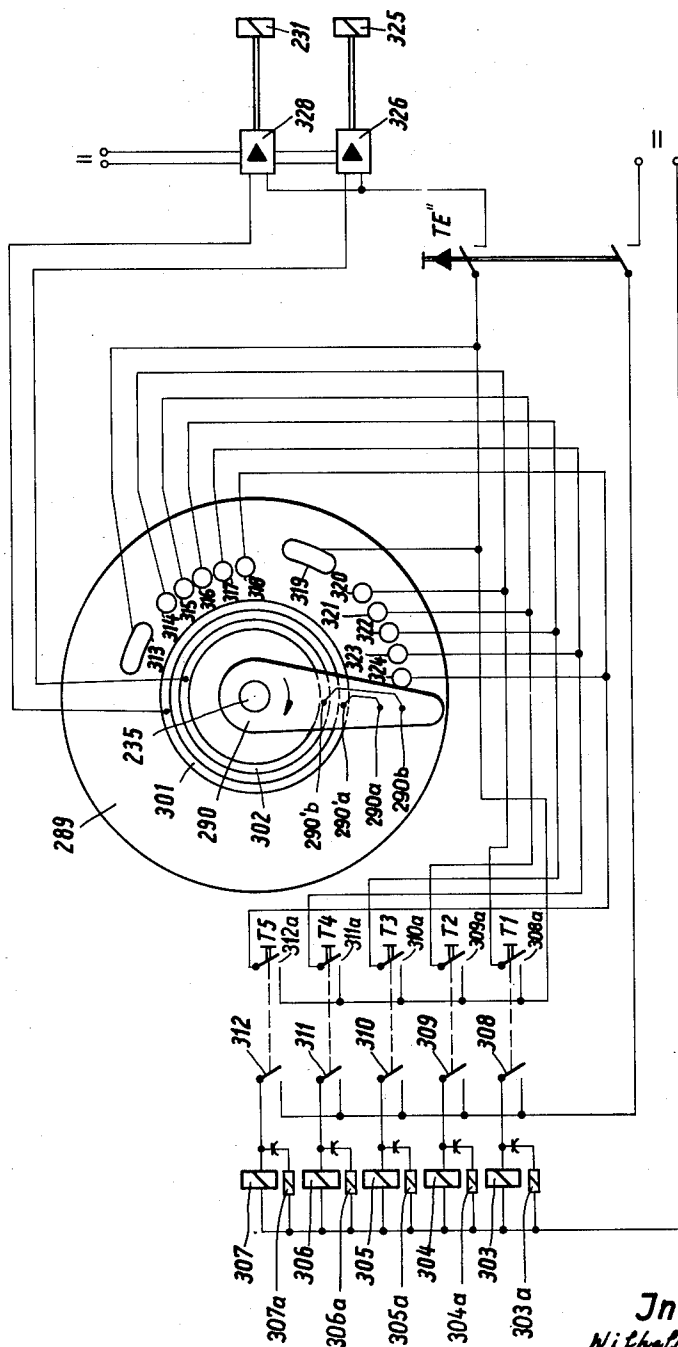
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ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM

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12 Sheets-Sheet 12

Fig. 12



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**ROTARY OFFSET PRINTING MACHINE FOR A MOVABLE PRINTING FORM**

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32 Claims. (Cl. 101—144)

The present invention relates to an offset printing machine for a movable printing form, and more particularly to an offset printing machine in which a movable printing form is stepwise moved into the interior of the printing roller so that successive selective lines are located in the printing position adjacent another printing form which carries the head section of a text.

A number of offset printing machines are known which are capable of selective printing of selected lines of a text in such a manner that the selected lines appear adjacent the head section on the copy sheet, although the selected lines are located spaced from the head section on the printing form.

It is one object of the invention to improve known offset printing machines of this type, and to provide an offset printing machine of simple construction which permits the rapid printing of many clear copies of selected lines of a text adjacent the head section of the text.

Another object of the invention is to provide an offset printing machine which permits the automatic printing of successive lines of a text on successive copy sheets, each of which also receives an imprint of the head section adjacent the selected line.

Another object of the invention is to provide an offset printing machine capable of printing several selected lines on each successive copy sheet.

Another object of the invention is to provide an offset printing machine capable of printing different selected lines on successive copy sheets, each of which receives the imprint of the same head section directly adjacent the imprints of the different selected lines of the text section.

Another object of the invention is to use a different part of the blanket on the offset roller for receiving a copy of the text to be printed so that each copy sheet is printed by a different portion of the blanket.

Another object of the invention is to provide automatic means for moving an offset roller between a transfer position cooperating with a printing roller having a printing form thereon, and a printing position cooperating with a copy sheet on a counter pressure roller.

Another object of the invention is to provide an offset printing machine with a printing roller having pressure segments movable to an impression producing position cooperating with the offset roller, so that the offset roller need not be shifted toward the printing roller for receiving a copy of the selected text.

With these objects in view, one embodiment of the invention is an offset printing machine which comprises printing roller means including a printing roller, means for movably holding a printing form on the peripheral surface of the printing roller, and transporting means for shifting the printing form in steps corresponding to parts of the text of the printing form; offset roller means cooperating with the printing roller; means for effecting rolling engagement between the offset roller means and selected parts only of the printing form; and means for causing rolling movement of the offset printing roller means on copy sheets successively fed after each revolution of the printing roller. Control means are provided for actuating the transporting means after a revolution of the printing roller so that the printing form is shifted to place a different line of the text in a printing position. During suc-

cessive revolutions of the printing roller, copies of different lines of the text are transferred to the peripheral surface of the offset roller means, and when the offset roller means imprints successive copy sheets, each copy sheet receives the imprint of a different selected part or line of the text.

Means act on the offset roller means during each revolution of the printing roller for moving the respective newly made copy of a text part relative to the surface of the printing form in circumferential direction of the offset roller means so that during the following revolution of the printing roller, the copy of the different text part is made on an unused clean portion of the peripheral surface of the offset roller means.

In the preferred embodiment of the invention, the offset roller with the blanket thereon is turned relative to the printing roller while the drive from the printing roller to the offset roller is temporarily interrupted by disengagement of a coupling.

In the preferred embodiments of the invention, a counter pressure roller cooperates with the offset roller means which is automatically moved between a position spaced from the counter pressure roller, and a printing position cooperating with the counter pressure roller, or more particularly with a copy sheet held by a holding means on the peripheral surface of the counter pressure roller.

At least one control member is provided which cooperates with the transporting means for the movable printing form to shift the same during each revolution of the printing roller. Whenever the printing form is shifted, another line is placed in a printing position for transferring a copy thereof to the blanket of the offset roller. If only one control member is provided, the movable printing form is shifted one step during each revolution of the printing roller, and successive lines of the text are printed on the copy sheet.

In another embodiment of the invention, a plurality of control members can be moved by electromagnetic means between the inoperative position and an operative position located in the path of movement of an actuating member for the transporting means of the printing form.

Selector means, preferably including manually operated selector keys respectively associated with different parts or lines of the text, are provided for causing the electro-magnetic means which operate the control members to shift the same to an operative position for actuating the transporting mechanism.

The selector keys are actuated by the operator before the printing operation starts, and the actual shifting of the printing form, and all other necessary operations are automatically carried out under the control of a contact arrangement including a rotary contact arm, and a stationary contact member having a plurality of stationary contacts respectively corresponding to the lines of the text section, and preferably also including a longer contact corresponding to the head section.

In another embodiment of the invention, the peripheral surface of the printing form is partly formed by a pressure member which is movable to an impression-producing outer position cooperating with the blanket on the offset roller. Selector means permit the selection of those pressure members which are to be placed in the operative position, whereby the selection of desired lines of the text of the printing form becomes possible. The printing form is automatically shifted, as described above to place different selected lines on the outer pressure faces of the pressure members.

In order to expose a clean portion of the blanket to the printing form, the driving connection between the printing roller and the offset roller is interrupted by the disconnection of the coupling means, and the offset roller is turned relative to its synchronized position so that dur-

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ing successive revolutions of the printing roller, different parts of the blankets receive a copy of the selected portions of the printing form. When the entire blanket is covered, or when all lines of the printing form are printed, the offset roller is cleaned and another printing form may be mounted on the printing roller and used for a printing operation.

The coupling means between the drive from the printing roller, and the offset roller may be electro-magnetic clutch automatically operated from the rotary contact arm of the contact device, or may be a mechanical coupling which is disconnected by the operation of electro-magnetic means.

The novel features which are considered as characteristic for the invention are set forth in particular in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings, in which:

FIG. 1 is a side view, partially in section, illustrating an offset printing machine for lithographic printing forms according to one embodiment of the invention;

FIG. 2 is a cross-sectional view on an enlarged scale illustrating a transporting mechanism for transporting a printing form on the periphery of a printing roller and into the interior of the same;

FIG. 3 is a cross sectional view of a detail of the embodiment of FIG. 1 on an enlarged scale and particularly illustrating the offset roller construction;

FIG. 4 is a fragmentary developed plan view of the embodiment of FIG. 1;

FIG. 5 is a diagram illustrating the electric circuit of the embodiment of FIG. 1;

FIG. 6 is a detail of a modified embodiment shown on an enlarged scale, and particularly illustrating a construction of the offset roller which may be substituted in the embodiment of FIG. 1 for the offset roller illustrated in FIG. 3;

FIG. 7 is a fragmentary developed plan view of the embodiment shown in FIG. 6;

FIG. 8 is a diagram illustrating the electric circuit of the embodiment of FIG. 6;

FIG. 9 is a schematic fragmentary side view, partially in section, illustrating another embodiment of the invention;

FIG. 10 is a fragmentary sectional view on an enlarged scale illustrating the construction of the printing roller in the embodiment of FIG. 9;

FIG. 11 is a fragmentary developed plan view of the embodiment of FIG. 9; and

FIG. 12 is a diagram illustrating the electric circuit of the embodiment of FIG. 9.

Referring first to the embodiment illustrated in FIGS. 1 to 5, a printing roller is mounted on a shaft 2 and is continuously rotated by a motor, not shown. Moistening means 39, and ink applying means 40 are provided in the region of the printing roller 1.

An offset roller 20 is mounted on a shaft 19 supported on lever means 23 which are turnable about a shaft 38 secured to the frame of the machine. Gears 45 and 51 are respectively secured to shafts 19 and 2 and mesh with a pair of meshing gears 43 and 42 which are mounted on a link to maintain the meshing engagement when support lever means 23 are displaced together with shaft 19.

A counter pressure roller 34 is mounted on a shaft 44 and is continuously rotated from shaft 19 by means of gears 45, 46, 47 and 48. A blanket 20 is mounted on the periphery of the offset roller 20, and is held by holder means 22.

The printing roller 1 has on the periphery thereof a fixed printing form 3 which contains a head section of the text which is to be repeatedly printed on successive copy sheets, and also a movable printing form 4 which

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is partly located on the periphery of the printing roller, but which has a part extending through a slot into the interior of the hollow printing roller 1, as best seen in FIG. 2. A pair of transporting rolls 11 and 12 engages the inner portion of the movable printing form, and transporting roll 11 is actuated to move in steps by a stepping mechanism including a ratchet wheel 10 and an actuating pawl 6 which is mounted on the end plates of the printing roller 1 turnable about a shaft 7, and which is biased by a spring 8 to normally abut a stop 9. A projecting roller is mounted on the end of the actuating pawl 6. A locking pawl 14 is biased by spring 15 and is turnable about a shaft 49 to normally engage the ratchet wheel 10 so that transporting roll 11 is normally blocked. A pair of guide means 16 and 17 is mounted in the interior of the printing roller 1 to guide the inner portion of the printing form. Transporting roll 13 is mounted on a lever means 50 which is spring biased, and which can be operated in such a manner that transporting roll 13 releases the movable printing form 4 permitting the removal of the printing form 4 from the printing roller 1.

A series of control members 18 is mounted in the region of the periphery of printing roller 1, each control member being movable between an outer inoperative position and an inner operative position projecting into the path of movement of the actuating member 5, 6 for operating the same during rotation of the printing roller 1. Whenever roll 5 will engage one of the control members 18, the ratchet wheel 10 will be operated to move one step, and transport the movable printing form 4 a step corresponding to a line or other part of the text thereon. Those control members 18 which are in the inoperative position will not engage actuating member 5, 6, and consequently no shifting of the printing form will take place when roll 5 passes a respective control member 18 in the inoperative position.

Support lever means 23 can be placed in a neutral position in which printing roller 1, offset roller 20, and counter pressure roller 34 will not engage each other. Support lever means 23 have an opening in which eccentric means 25 is located, eccentric means 25 being secured to a lever 24 for turning movement therewith. The end of lever 24 is secured to a shiftable member 26 which is controlled by a pair of electro-magnetic means 28 and 31 whose armatures are secured to members 27 and 30 which are connected to member 26. A spring means 29 is secured to lever 24, and is mounted in such a manner that lever 24 tends to snap into one or another dead center position as shown in FIG. 1. The eccentric member 25 will cause the offset roller 20 to move to a transfer position in which offset roller 20 cooperates with printing roller 1, or will cause an engagement between offset roller 20 and counter pressure roller 34 in the printing position, depending on the position of lever 24.

As shown in FIGS. 1, 4 and 5, a contact means 89 is secured to the frame of the machine, and a contact arm 90 is secured to shaft 35 which carries a gear 93 connected by gear train 91, 92 to gear 48 which is secured to shaft 44 of the counter pressure roller. Consequently, contact arm 90 will rotate in synchronism with the other rollers.

The stationary contact means 89 has a plurality of contact buttons arranged along portions of three concentric circular lines. As best seen in FIG. 5, the contact buttons 55 to 99 are arranged on an outermost circle on which a longer contact 94 is also located. The contact buttons 120 and 124 are arranged along an inwardly located circular line on which a longer contact 119 is located. The contact buttons 114 to 118 are arranged along a third innermost circular line on which a longer contact 113 is also located. Contacts 90a, 90b and 90c move with contact arm 90 and are respectively associated with the three groups of stationary contact but-

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tons. The three corresponding contacts 90'a, 90'b and 90'c are respectively connected to contacts 90a, 90b and 90c and slide over three circular slide rings 100, 102 and 101 which are respectively connected to amplifiers 127, 128, and 126. Amplifiers 126, 127, 128 are also connected to a source of direct current, and to a switch means TE including two contacts TE1 and TE2. Amplifiers 126, 127, 128 are respectively connected to three electro-magnetic means 125, 31 and 28. As explained above electro-magnetic means 28 and 31, which are also shown in FIG. 1, operate the offset roller 20 to move between transfer and printing positions. Electro-magnetic means 125 is part of a magnetic clutch 125 which is shown in FIG. 4.

One coupling part 87 of electro-magnetic clutch 125 is fixedly connected to a gear 76. The journal 85 supports gear 76 which is driven by a gear train 77, 78 and 51 to rotate at a higher speed than gear 45.

The other coupling part 81 of electro-magnetic clutch means 125 is connected with the offset roller 20 by a key 86. Gear 45 is freely rotatable on the hub of coupling part 81, and has a coupling pawl 82 which is mounted on a pin 84 on gear 45. Coupling pawl 82 is biased by a spring 83 to engage the toothed coupling part 81. Brushes 88 supply current to the electro-magnetic clutch means 125, suitable slide rings being provided for this purpose. When electro-magnetic clutch means 125 is energized, the coupling parts 81 and 87 are in coupling engagement, so that the offset cylinder 20 rotates faster than the gear 45 which rotates in synchronism with the printing roller 1. The spring-loaded coupling pawl 82 slides all over the teeth of coupling part 81 during such relative rotation.

Referring again to FIG. 5, the stationary contacts of contact member 89 are all connected to each other, and to a series of switches 108a to 112a which are manually operated by selector keys T1 to T5. The same selector keys also operate switches 108 to 112 which are respectively connected to electro-magnetic means 103 to 107 which operate six control members 18, only three control members 18 being shown in FIG. 2, and only one control member 18 being shown in FIG. 1 for the sake of simplicity.

Switch contact TE1 is connected to all manually operated switches 108a to 112a, and switch contact TE2 is connected to all manually operated switches 108 to 112. Switch contact TE1 is also connected to the three longer contacts 94, 113 and 119 which are respectively associated with the fixed printing form 3 which carries the head portion of a text to be printed. The selector switches 108, 108a, to 112, 112a, the electro-magnetic means 103 to 107, and the control members 18 are respectively associated with lines or selected parts of a text section which appears on the movable printing form 4. By operation of selected selector T1 to T5, desired lines or parts of the text section on printing form 4 can be selected for printing on a copy sheet 36 on counter pressure roller 34. While different lines of the text section will be selected to be printed on successive copy sheets 36, the head portion of the text which appears on the fixed printing form 3 will be repeated on all successive copy sheets, and the head section of the text will appear adjacent the selected line of the text section on the copy sheet.

The copy sheets 36 are fed from a stack by conventional feeding means 37 so that a copy sheet will be supplied to the counter pressure roller after each revolution.

The embodiment illustrated in FIGS. 1 to 5 is operated as follows: The fixed printing form 3 with the head text and the movable printing form 4 with the text section are inked by the ink applying means 40. The electromagnetic means 28 and 31 are de-energized, and spring 29 holds the link 24 and the eccentric member in

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a dead center position in which the offset roller 20 is spaced from printing roller 1 and from counter pressure roller 34.

The operator selects now the lines of the text section on printing form 4 which he desires to be printed, for example the first two lines, and in this event he actuates the selector keys T1 and T2. The selector contacts 108, 108a, and 109, 109a are closed. Switch means TE is operated, and the circuit is closed when contact 90c passes over stationary contacts 94 to 99 during the rotation of contact arm 90. Amplifier 127 is energized since contact 90'c slides on slide ring 100 which is connected to amplifier 127. Electro-magnetic means 28 is energized, and as best seen in FIG. 1 will act through members 27, 26 and 24 on eccentric member 25 to turn the same so that support lever means 23 is turned to a position in which the blanket 21 is in contact with the printing forms 3 and 4.

A copy of the head section on printing form 3, and a copy of the first two lines of the text section on printing form 4 is transferred to blanket 21.

Due to the closing of selector switches 108 and 109 electro-magnetic means 103 and 104 of the first two control members 18<sub>1</sub> and 18<sub>2</sub> are energized and move the respective control member to the operative position located in the path of movement of actuating member 5, 6. Consequently, actuating member 5, 6 is twice operated to shift the ratchet wheel 10 two steps so that printing form 4 is transported by transport rolls 11 and 13 two steps corresponding to two lines. Since selector keys T3, T4 and T5 were not actuated, the contact buttons 97, 98 and 99 are not connected into the circuit, so that during the following turning movement of contact arm 90, electro-magnetic means 28 is de-energized so that offset roller 20 with supporting lever means 23, 24 is pulled by spring 29 to a position in which it is spaced from printing roller 1 so that no copy of the following three lines can be transferred to the blanket 21.

Contact arm 90 moves now to a position in which contact 90b first engages contact 113 and then contact 114 to 118. When contact 90a engages contact 113, a circuit is closed through contact 90'a and slide ring 101 so that electro-magnetic means 31 is energized through amplifier 128. Offset cylinder 20 is shifted by the linkage 30, 26, 24, 25 and 23 into a printing position cooperating with the counter pressure roller 34. The printing form 3 engages the copy sheet 36 as long as contact 90a is located on stationary contact 113, and when contact 90a engages contacts 114 and 115 which are also associated with the selector switches 108a and 109a, the circuit of electro-magnetic means 31 is also closed, and the first two lines of the transferred copy of the text on blanket 21 are transferred to the copy sheet 36 in the same manner as the head section.

While the contact arm 90 passes over the stationary contact buttons 116, 117, 118, the circuit of electro-magnetic means 31 is interrupted since the corresponding selector switches are open, and the offset cylinder is moved by spring 29 to a position spaced from counter pressure roller 34.

During further rotation of contact arm 90, contact 90b passes over contacts 119 to 124. Contacts 119, 120 and 121 effect the connection of electro-magnetic clutch means 125 into the circuit of the source of direct current, since the corresponding selector switches 108a and 109a are closed.

As best seen in FIGS. 3 and 4, the energized copy means 125 will assume a coupling position in which the coupling parts 87 and 81 are coupled to each other so that the faster rotating coupling part 87 turns the offset roller at a higher speed than before, and relative to gear 45 which is coupled for rotation in one direction to the offset roller 20 by the coupling pawl 82 and the toothed wheel 81.

Since the offset cylinder 20 driven by gear train 76, 77,

78, and 51 rotates faster than the printing roller 1 and the gear 45 driven thereby, the head text copy and the copy of the two first lines of the text on the blanket are angularly displaced from the previous position so that a clean blanket portion is now in a position cooperating in synchronism with the printing roller 1. The machine has now returned to its initial position as far as the printing roller and the counter pressure roller are concerned, but the offset roller is angularly displaced to rollers 1 and 34, and when during a following printing operation, a copy of the text of the printing form is transferred to the offset roller 20, it will be located on the clean portion of the blanket, which would not have been the case if the offset roller 20 would still be in its original position, in which event a second copy would have been made over the first copy on the blanket.

Before the next copy sheet is printed, a new selection of desired lines of the text section on printing form 4 may be made, and for example, lines 3, 4 and 5 may be selected by operating selector keys T<sub>3</sub>, T<sub>4</sub> and T<sub>5</sub>. When switch TE is again operated, the three rollers will rotate in synchronism together with contact arm 90, the head section will be transferred to the offset roller blanket 21 when the contact arm 90 passes over contact 94, and the three lines of the text will be transferred from the printing form 4 to the offset roller blanket when contact arm 90 passes over contact buttons 97 to 99.

The corresponding three lines of the text on the movable printing form 4 will be located adjacent the fixed printing form 3, since during the preceding revolution of the printing roller, control members 18<sub>1</sub> and 18<sub>2</sub> were effective to cause the displacement of the movable printing form 4 to a position in which the previously used first two lines of the text section of the printing form were drawn into the interior of the hollow printing roller 1 while the following three lines of the text sections were placed in a position adjacent the gap between the fixed printing form 3 and the peripheral portion of the printing form 4.

Since the head section on printing form 3 and the last three lines of the text section of printing form 4 are located adjacent each other on the printing roller 1, the copy transferred to the blanket 21 of offset roller 20 will have the head sections and the three last lines of the text sections located adjacent each other, and on the clean portion of the blanket which was placed in the proper position by more rapidly turning the offset roller 20 during the preceding revolution of printing roller 1, an imprint is made on the copy sheet on the counter pressure roller, and when contact arm 90 passes over contact 119 and 122, 123 and 124, the offset roller will again be more rapidly turned to remove the imprinted portion of blanket 21 from the angular position in which the next imprint from printing roller 1 and printing forms 3 and 4 will be made on the offset roller blanket 21.

The modified embodiment illustrated in FIGS. 6, 7 and 8 has a general arrangement corresponding to FIG. 1. However, no selector means are provided, but in accordance with this embodiment, successive lines of the text on the movable printing form 4 are printed on successive copy sheets 36. Consequently, the selector switches are omitted, and only a single control member 18' is provided, whose position corresponds to control member 18 shown in FIG. 1 which, however, is immovable and fixedly secured to a wall of the frame of the machine, as best seen in FIG. 7. The moistening means 39, the ink applying means 40, and the feeding means 37 correspond to the embodiment of FIG. 1, a contact arrangement including a stationary contact member 129 and a rotating contact arm 90 is provided. Contact arm 90 is again driven from the counter pressure roller and from the printing roller, and consequently rotates in timed relation with the same. Gear trains, as shown in FIG. 1, are provided for this purpose, and partly shown in FIG. 6.

As described in detail with reference to the embodiment

of FIGS. 1 to 6, the offset roller is mounted on supporting lever means 23 which are controlled by a lever means 24 and by an eccentric member 25 to move the offset roller 20 between a neutral position, a transfer position cooperating with the printing forms 3 and 4 on printing roller 1, and a printing position cooperating with a copy sheet 36 on counter pressure roller 34. A toothed coupling wheel 59 is secured to a locking wheel 53, both wheels being mounted on shaft 19 of the offset roller 20. A stationary toothed segment 52 is fixedly secured to a frame wall of the machine, and cooperates with the teeth of locking wheel 53. When offset roller 20 and shaft 19 are in the neutral position, the teeth of locking wheel 53 are spaced from the teeth of the locking segment 52, but when offset roller 20 is moved to the transfer position cooperating with printing roller 1, the stationary locking segment engages the teeth of the locking wheel 53, and locks the same together with the coupling ratchet wheel 59.

Gear 45 which rotates in synchronism with printing roller 1 due to the gear train 51, 42, 43, carries a locking pawl 60 which cooperates with the teeth of coupling ratchet wheel 59. When wheels 53 and 59 are both locked by locking segment 52, gear 45 continues to rotate while coupling pawl 60 slides over the teeth of ratchet wheel 59 which is possible since ratchet pawl 60 is turnably mounted on a pivot 61 and is loaded by a spring which urges pawl 60 into engagement with ratchet wheel 59. A roller 63 is provided at the outer end of pawl 60.

Another coupling ratchet wheel 54 is mounted on shaft 19, and cooperates with a coupling pawl 58 turnably mounted on a pivot 56 on offset cylinder 20 and having a roll 54 at the free end thereof. Coupling ratchet wheel 55 is fixedly connected with gear 45 for rotation therewith, and consequently rotate in synchronism with the printing roller 1. Offset cylinder 20 is normally connected to gear 45 due to the coupling engagement between coupling pawl 58 and coupling ratchet wheel 55.

Four part-circular operating members 72, 73, 74, and 75 are located along the circular path of roll 54 and are normally spaced from the same. However, operating members 72 to 75 can be simultaneously moved to an inwardly displaced position in which the rotating coupling pawl 58 engages with its roll 54 the inner surfaces of the operating members and is thus held in a position releasing coupling ratchet wheel 55.

Springs 78, 79, 70 and 71 are secured to the operating members 72 to 75, and tend to hold the same in the outer inoperative position. Four electro-magnetic means 64 to 67 are connected to the operating members 72 to 75, and move the same to the inwardly located operative position, when simultaneously energized.

An abutment 142 is secured to one end wall of offset cylinder 20 and cooperates with an abutment 143 which is secured to the locking wheel 53. A U-shaped spring 144 passes over abutments 142 and 143, and over shaft 19 and urges abutments 142, 143 into an engaged position.

Referring now to FIG. 8, it will be seen that the contact device includes two long stationary contacts 130 and 132, which correspond to the length of the head section of the text provided on the fixed printing form 3, and two contact buttons 131 and 133 which are associated with a line of the text section on printing form 4. A contact 90a on contact arm 90 cooperates with contacts 132, 133, a contact 90b cooperates with the longer stationary contact 134, and a contact 90c on contact arm 90 cooperates with contacts 130 and 131 during rotation of contact arm 90. Contacts 90a, 90b and 90c are respectively connected to contacts 90'a, 90'b and 90'c which respectively slide on circular slide contacts 136, 137 and 135.

Slide ring 135 is connected to an amplifier 127 which connects a source of direct current with the electro-magnetic means 28, and slide ring 136 is connected to amplifier 128 which connects the source with electro-magnetic means 31. As described with reference to FIG.

1, electro-magnetic means 28 and 31 act through a spring biased linkage 26, 27, 30, 24 and eccentric member 25 on the supporting lever means 23 of the offset roller 20 to move the offset roller 20 from its normal neutral position to the transfer position cooperating with printing roller 1 and to the printing position cooperating with counter pressure roller 34. The third slide ring 137 is connected to a group of amplifiers 138 to 141 which are respectively connected to the four electro-magnetic means 64 to 67 which effect the movement of operating members 72 to 75 to an inwardly displaced operative position. A main switch TE' connects all stationary contacts of the contact device 129 with the amplifiers 127, 128, and 138 to 141, and consequently to all electro-magnetic means.

The embodiment illustrated in FIGS. 6, 7 and 8, and to some extent also in FIG. 1, is operated as follows:

Printing roller 1, offset roller 20, and counter pressure roller 34 rotate at first in a neutral position in which they are spaced from each other. The printing forms 3 and 4 are inked by the ink applying device 40. When the main switch TE' is operated, the electro-magnetic means are all connected to the stationary contacts, and the circuit of each electro-magnetic means is closed when a corresponding contact on contact arm 90 passes over an associated stationary contact.

Contact 90c first engages the stationary contact 130 so that electro-magnetic means 28 is energized to move offset roller 20 to the transfer position in which blanket 21 is in rolling engagement with the fixed printing form 3 on which the head section of the text appears. The length of contact 130 corresponds to the circumferential extension of the head text, so that a copy of the head text is transferred to the blanket 21. When contact 90c passes beyond contact 130, electro-magnetic means 28 is de-energized, and spring 29 moves offset roller 20 back to its neutral position. Immediately thereafter, contact 90c engages contact button 131, and electro-magnetic means 28 is again energized through contact 90c, 90'c, slide ring 135 and amplifier 127 so that the first line of the text section on printing form 4 is transferred to blanket 21. Since the first line of the text section on printing form 4 is spaced from the head section on printing form 3 only by the gap between the two printing forms, the line appears on the blanket adjacent the head section.

During this part of the rotation of offset roller 20, the locking wheel 53 was moved with offset roller 20 to a position in which its teeth engage the teeth of the stationary locking member 52 so that ratchet wheel 59 is blocked and cannot rotate. Since coupling pawl 58 is secured to offset cylinder 20, and since coupling wheel 55 rotates with gear 45, offset roller 20 is coupled with gear 45 which is driven from the printing roller, and consequently, this part of the rotation of offset roller 20 takes place in synchronism with the rotation of printing roller 1. Pawl 61, which is mounted on gear 45, rotates with the same and with offset roller 20, and since ratchet wheel 59 is locked together with locking wheel 53, pawl 60 slides over the teeth of the locked ratchet wheel 59.

Since the abutment 143 on locking wheel 53 does not move, whereas abutment 142 on offset roller 20 moves with the offset roller 20, abutment 142 moves away from abutment 143 while spring 144 is tensioned, and tends to move offset roller 20 back to its initial position. After the head section and the first line of the text section has been transferred to the blanket of the offset roller 20, abutment 142 will be spaced from abutment 143 an angular distance corresponding to the angular spacing between the head section and the first line of the text section, and also to the circumferential extension of the transferred copy on blanket 21.

Since it is intended that a different line of the text section on printing form 4 is printed on each successive copy sheet together with the head section on the fixed printing form 3, the printing form is now shifted. This

is accomplished by engagement between the roll 5 of actuating member 6 with the single stationary control member 18' which is fixed to the frame of the machine, as best seen in FIG. 7. The position of actuating member 18' corresponds to the position of actuating member 18 shown in FIG. 1, and the construction of the stepping mechanism which transports the movable printing form 4, corresponds exactly to the construction shown in FIGS. 1 and 2.

Since only a single control member 18 is provided, the printing form 3 is shifted a distance corresponding to one line, and the part of the printing form carrying the first line of the text section is moved into the interior of the hollow printing roller 1 so that the second line of the text section is now located adjacent a gap between the movable printing form and the fixed printing form.

Consequently, during the following revolution of the printing roller 1, the head section and the second line of the text section will form a mirror-script transferred copy on the blanket 21.

However, if offset roller 20 and printing roller 1 would be placed in rolling engagement during the following revolution of the printing roller 1 another copy of the head section would be superimposed on the copy of the head section made during the preceding revolution, and a copy of line 2 would be superimposed on the copy of line 1 made during the preceding revolution of printing roller 1.

This is prevented by causing offset roller 20 to turn relative to the printing roller 1 so that a clean part of the blanket 21 is placed in a position for receiving the transferred copy of the head section and of the second line of the text section during the next revolution of printing roller 1.

Referring again to the first revolution of printing roller 1, a copy of the head section and of the first line of the text section has been made on blanket 21, and thereupon the printing form 3 was shifted one step. Contact arm 90 continues its revolution, and contact 90b engages contact 132, and then contact 133. A circuit is closed through contact 90'a, slide ring 136, amplifier 128 to energize electro-magnetic means 31 so that offset roller 20 is shifted to the printing position cooperating with counter pressure roller 34. While contact arm 90 cooperates with contact 132, the copy of the head section on copy sheet 36, and when contact arm 90 passes over contact button 133, the first line of the text section is transferred from the blanket 21 to copy sheet 36.

Contact arm 90 continues its revolution, and contact 90b arrives at contact 134 so that a contact is closed through contact 90'b, slide ring 137, the four amplifiers 138 to 141 to energize the four electro-magnetic means 64 to 67 by which the operating members 72 to 75 are moved to the inwardly displaced operative position engaging roll 54 of coupling pawl 58 so that coupling pawl 58 is turned to a releasing position releasing coupling ratchet wheel 55 which is secured to gear 45. Consequently, the coupling between the offset roller and gear 45 which rotates in synchronism with the printing roller 1, is interrupted. The tensioned spring 144 acts through abutment 142 to turn offset roller 20 an angular distance corresponding to the peripheral length of the head section and of one line of the text section, so that the peripheral portion of the blanket 21 which carries a copy of the head section and of the first line of the text section, is angularly displaced whereby a clean portion of the blanket is placed in an operative position to be engaged by the printing forms during the next following revolution of the printing roller.

The printing roller and contact arm 90 arrive again at the initial position, and during the following second revolution of printing roller 1, the above described operations are repeated, but line 2 is transferred to a clean portion of the blanket, and thereupon an imprint of the

head section and of line 2 of the text section is made on another copy sheet which has been automatically supplied by the feeding means 37 in a conventional manner. During the following revolutions, successive lines of the text are printed on successive copy sheets, and it will be understood that every time a new copy is transferred to the blanket 21, the blanket is shifted to a position to prevent a super-imposing of transferred copies. When the blanket carries five copies which distinguish from each other by different lines of the text section, it is substantially covered, and the offset roller 20 is manually turned to a position cooperating with a washing device 41, 46, shown in FIG. 1, to be cleaned.

While offset roller 20 is in its neutral position, with locking wheel 53 spaced from locking member 52, locking wheel 53, and ratchet wheel 59 are coupled to gear 45 by pawl 60 on gear 45 so that the torque for turning the connected wheels 59 and 53, need not be provided by the spring 144.

Referring now to the embodiment illustrated in FIGS. 9 to 12, and more particularly to FIG. 9 which illustrates the general arrangement of this embodiment, a printing roller 201 is mounted on the shaft 202 and is rotated by motor, not shown. Holding means are provided for holding on the periphery of printing roller 202, a fixed printing form 203 which carries the head section of the text, while transporting rollers 211 and 213 are driven by stepping mechanism to move a movable printing form 204 stepwise from the periphery of printing roller 201 into the interior of the same. The stepping mechanism includes, as described with reference to FIG. 2, a ratchet wheel 10, a locking pawl 14 turnably mounted on a journal 49 on printing roller 201, and being loaded by a spring 15 to engage the ratchet wheel 10. An actuating pawl 6 cooperates with ratchet wheel 10 and has a roll 5 which successively engages control members 218 during rotation of printing roller 201. A spring 8 acts on the actuating pawl 6 and holds the same normally against a stop 9. As shown in FIG. 10, guide means 216, 217 guide the printing form 204. Transporting roller 213 corresponding to roller 13 of FIG. 2 is mounted on a turnable lever 50 which permits a retraction of transporting roller 213 to a position in which the operator can remove the movable printing form 204. Control members 218 are normally retracted by springs to an inoperative position, but in the illustrated operative position they are located in the path of movement of roll 5, and effect stepwise shifting of ratchet wheel 10 whenever roll 5 engages one of the control members 218 so that, if three control members 218 are in the operative illustrated position, the movable printing form 204 will be shifted three steps corresponding to three lines, or corresponding parts, of a text appearing on the movable printing form 204.

Moistening means 239, and ink applying means 240 cooperate with the printing roller 201, for moistening and inking printing forms 203 and 204 during rotation of printing roller 201.

The offset roller 220 is mounted on a shaft 219 which is supported on supporting lever means 223 so that turning of supporting lever means 223 about shaft 238 will move offset roller 220 from the illustrated neutral position to a printing position cooperating with the peripheral surface of counter pressure roller 234, and more particularly with a copy sheet 236 fed by automatic feeding means 237 in a conventional manner to holding means on counter pressure roller means 234. In contrast to the above described embodiments, offset roller 220 cannot be moved toward printing roller 201, but the neutral position illustrated in FIG. 9 is also the transfer position for transferring copies of the head section and text section from the printing forms to blanket 221 on offset roller 220. Blanket 220 is held by a pair of holding means 222.

A gear train 251, 242, 243, 245 connects printing roller 201 and offset roller 220 for rotation in synchronism,

gears 246 and 247 connect gear 245 with gear 248 so that the counter pressure roller is also driven in synchronism, and gears 291, 292 and 293 connect shaft 244 of counter pressure roller 234 with the rotary contact arm 290 of a contact device 289.

Supporting lever means 223 are operated by an electro-magnetic operating means 231 whose armature is secured to a connecting member 330 which is pivotally connected with a cross bar 329 connecting the ends of levers 223 as best seen in FIG. 11. A spring 331 acts on supporting lever means 223 to hold the same against a stop 332 until electro-magnetic means 231 is energized to move offset roller 220 to a printing position cooperating with counter pressure roller 234.

The construction of printing roller means 201 is best seen in FIG. 10. A plurality of axially extending circumferentially adjacent pressure segments 228 is provided, three pressure members 228 being illustrated in FIG. 10, and each pressure member 228 has an outer pressure face which forms part of the peripheral surface of printing roller 201. Each pressure face has a circumferential extension corresponding to a selected part, such as a line, of the text on the printing form 204, and as clearly shown in FIG. 11, the printing form 204 is located on pressure members 228.

Each pressure member 228 can be operated by the armature of an electro-magnetic means 203a, 204a, 205a to move between a retracted inoperative position illustrated for a pressure member 228-3Z, and an outer impression producing position illustrated for pressure members 228-1Z and 2Z.

The spacing between the outer surface of blanket 221 on offset roller 220, and the outer pressure faces of pressure member 228 is such that printing form 204 does not engage blanket 221 where located on the major part of the peripheral surface of printing rollers 201, or where located on a retracted inoperative pressure member 228, but engages blanket 221 where located on pressure members 228 in the outer, impression-producing position, as shown for the upper two pressure members 228 in FIG. 10. In other words, when printing roller 201 and offset roller 220 rotate in synchronism in the direction of the arrows in FIG. 10, they will remain spaced from each other until first the fixed printing form 203 contacts blanket 221 due to the fact that the height of the peripheral portion of printing roller 201 which supports the fixed printing form 203, corresponds to the height of pressure members 228 in the outer impression-producing position. During further rotation of printing roller 201, two parts of printing form 204, which are located on the faces of the pressure member 228-1Z and 228-2Z will engage blanket 221 and will transfer copies of corresponding two lines of the text section on printing form 204 to the blanket 221 in a position located adjacent the copy of the head section which was transferred from the fixed printing form 203.

Referring now to FIG. 12, the contact device 289 has a first group of contacts 313 to 318 cooperating with a contact 290a on contact arm 290, and a second group of contacts 319 to 324 cooperating with a contact 290b on contact arm 290. Contacts 290a and 290b are respectively connected to contacts 290'a and 290'b which slide on two slide rings 301 and 302 which are connected to a pair of amplifiers 228 and 226 which connect a source of direct current with electro-magnetic means 231, which operate supporting lever means 223 of offset roller 220, and with an electro-magnetic coupling means 325 whose structural details are best seen in FIG. 11 and which corresponds to the coupling means 125 illustrated in FIGS. 4 and 3.

One coupling part 287 has slide brushes 288 and is fixedly secured to a gear 276 which is carried by a journal 285 driven through a gear train 277, 278 and 251 from gear 245 which rotate in synchronism with the printing roller. Gear 245 is freely turnable on the hub portion of the other coupling part 281 which is connected by a key

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286 to the shaft of offset cylinder 220 so that coupling part 281 can be axially shifted between the coupling position and the released disconnected position. A pawl 282 is mounted on a pivot 284 on gear 245 and is urged by spring 283 to engage the toothed rim of coupling part 281.

When coupling parts 281, 287 are engaged upon energization of coupling means 225, offset roller 220 is driven at a higher speed than gear 245 which rotates in synchronism with printing roller 201, and consequently offset roller 220 is angularly displaced relative to printing roller 201. When coupling means 225 is again de-energized, spring-loaded copying pawl 282 again couples gear 245 with coupling part 281 and through key 286 with offset roller 220.

Referring again to FIG. 12, a switch means TE'''' is connected to a set of selector switches 308a to 312a respectively operated by keys T<sub>1</sub> to T<sub>5</sub> which are respectively associated with the first five lines of the text section on printing form 204. Keys T<sub>1</sub> to T<sub>5</sub> also operate selector switches 308 to 312 which are also connected to the switch means TE'', and which control a series of first electro-magnetic means 303a to 307a, and second electro-magnetic means 303 to 307 which are connected in parallel.

As explained above, electro-magnetic means 303 to 307a operate the pressure segment 228. Electro-magnetic means 303 to 307 respectively operate five control members 218, of which only three control members 218a, 218b and 218c are shown in FIG. 10.

The embodiment illustrated in FIGS. 9 to 12 is operated in the following manner:

The operator selects the lines of the text section on printing form 4, by depressing corresponding keys, for example keys T<sub>1</sub> and T<sub>2</sub>. Contacts 308, 308a, and 309, 309a are closed. When switch TE'' is closed, electro-magnetic means 303a and 304a are energized and move the corresponding pressure segments 218 to the outwardly located, impression-producing position, as shown in FIG. 11. The portion of printing form 204 having the first two lines on the text thereon is correspondingly raised for cooperation with the outer peripheral surface of blanket 221. As noted above, printing form 203 which carries the head section is located on a portion of printing roller 201 whose radial height is sufficient to assure a cooperation between printing form 203 and the outer peripheral surface of blanket 221.

At the start of the rotation of printing roller 201, the head section, and the first two lines of the text section are inked by the ink applicator device 240. During this part of the first revolution of printing roller 201 and of contact arm 290, the contacts 290a and 290b do not engage a stationary contact of the contact device 289. Consequently, electro-magnetic means 281 is de-energized, and spring 331 holds supporting lever means 223 against stop 232 so that offset cylinder 220 is in the position illustrated in FIG. 11. In this position, only the printing form 203, and the raised portions of printing form 204 located on operative pressure members 218 are effective to transfer copies of the head section, and of the first two lines of the text section to the blanket 221 on offset roller 220.

After the copy has been transferred to the blanket, the first two control members 218a and 218b which were moved to the inner operative position by electro-magnetic means 303 and 304, are engaged by the roll 205 of actuating pawl 206 as will be best understood with reference to FIG. 10, so that the transporting mechanism for printing form 204 is actuated, and printing form 204 is shifted two steps into the interior of the hollow printing roller 201.

The first two lines of the text section are moved into the interior of printing roller 201, and the following lines 3 to 5 are positioned on the periphery of printing roller 201 adjacent the gap which separates printing form 204 from printing form 203.

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Contact arm 290 arrives now first at the longer contact 313, and then passes over the contact button 314 to 318. Only contact buttons 314 and 315 are connected into the circuit by the corresponding closed selector switches 308a and 309a, while contacts 316 to 318 are connected to open selector switches. Contact 313 is directly connected through switch means TE'' to the electro-magnetic means 231 and 325. The circuit of electro-magnetic means 231 is closed through amplifier 328, slide ring 301, and contact means 290a and 290'a so that electro-magnetic means 231 operates supporting lever means 223 against the action of spring 331 and moves offset roller 220 to the printing position in which the peripheral surface of blanket 221 rolls on a copy sheet 236 previously fed to the counter pressure roller 243, and held on the periphery of the same by holding means, which are not an object of the present invention. Consequently, an imprint is made since the copy of the head section and of the first two lines of the text section is transferred from blanket 221 to the copy sheet.

When the contact arm passes beyond contact 315, electro-magnetic means 231 is de-energized, and spring 331 returns offset roller to its normal position spaced from both the printing roller 201 and the counter pressure roller 234.

During continued rotation, contact arm 290 passes over the contacts 319, 320 and 321 which are connected by selector switches 308a and 309a to the electro-magnetic coupling means 325 so that the same is energized.

During the time period when contact 290b engages contacts 319, 320 and 321, coupling parts 281 and 287 are connected, so that offset roller 220 rotates at the greater rotary speed than gear 45 which turns in synchronism with the printing roller 201. Consequently, the portions of the blanket carrying the copy of the head section of the first two lines of the text section are turned out of the position cooperating with printing roller 201. The angular displacement of the used portion of the blanket corresponds to the peripheral extension of the copy thereon, which is represented by contacts 319, 320 and 321. If three lines would have been transferred to the blanket, the blanket would have been turned a step farther, since contact 322 would also have caused an engagement of the electro clutch 325.

Locking pawl 282 couples gear 245 again with coupling part 281 when the electro-magnetic coupling 325 is de-energized. Coupling part 281 is connected by key 286 to offset roller 220, so that the same is again driven from printing roller 201 through gear 245. Printing roller 201 arrives again in its initial position, and contact arm 290 arrives in the corresponding position.

Assuming that the text section on printing form 204 has seven lines, lines 3 to 7 are now available for printing. If all five remaining lines are to be printed during the next revolution of the printing roller, the operator would have to depress all five keys T<sub>1</sub> to T<sub>5</sub>. When all switches 308 to 312 are closed, all five pressure members 228 will be moved by the corresponding electro-magnetic means 303a to 307a to the operative impression-producing position. Only three pressure members 228 are shown in FIG. 10, but five may as well be provided. If only three pressure members 228 are provided, then only three selected lines can be simultaneously printed, and in this event it would be necessary to actuate only switches T<sub>1</sub>, T<sub>2</sub> and T<sub>3</sub> before the next following revolution of the printing roller 1.

During such next following revolution of printing roller 1, a copy of the selected lines, and of the head section will be transferred to the clean portion of blanket 221 which was displaced together with the angularly turned offset roller relative to the pressure members 218 and to the printing form 203. After several revolutions, the entire surface of the blanket may be covered with copies, so that it will be necessary to turn the washing device 241 manually to a position for cleaning the blanket 221. New offset printing forms 203 and 204 may now be mounted

on the printing roller 201, and another printing operation may be started.

It will be understood that each of the elements described above, or two or more together, may also find a useful application in other types of offset printing machines differing from the types described above.

While the invention has been illustrated and described as embodied in an offset printing machine with a shiftable printing form, and an offset roller which is turned relative to the printing roller, it is not intended to be limited to the details shown, since various modifications and structural changes may be made without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can by applying current knowledge readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention and, therefore, such adaptations should and are intended to be comprehended within the meaning and range of equivalence of the following claims.

What is claimed as new and desired to be secured by Letters Patent is:

1. An offset printing machine comprising, in combination, printing roller means including a printing roller, means for movably holding a printing form on the peripheral surface of said printing roller, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form; control means for actuating said transporting means after a revolution of said printing roller so that the printing form is shifted; offset roller means cooperating with said printing roller; transmission means connecting said printing roller and said offset roller means for rotation in timed relation; means for effecting rolling engagement between said offset roller means and selected parts only of said printing form located on selected segments of said peripheral surface of said printing roller so that copies of different selected parts of the text are transferred to the peripheral surface of said offset roller means during successive revolutions of said printing roller; means acting on said offset roller means during each revolution of said printing roller for moving the respective newly made copy of a text part relative to the peripheral surface of said printing roller in circumferential direction of said offset roller means so that during the following revolution of said printing roller the copy of a different text part is made on an unused clean portion of the peripheral surface of said offset roller means; means for feeding a copy sheet to said offset roller after each revolution of said printing roller; and means for causing rolling movement of said offset roller means on copy sheets successively fed after each revolution of said printing roller so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller means.

2. An offset printing machine comprising, in combination, printing roller means including a printing roller, means for movably holding a printing form on the peripheral surface of said printing roller, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form; control means for actuating said transporting means after a revolution of said printing roller so that the printing form is shifted; offset roller means cooperating with said printing roller; transmission means connecting said printing roller and said offset roller means for rotation in timed relation; means for effecting rolling engagement between said offset roller means and selected parts only of said printing form located on selected segments of said peripheral surface of said printing roller so that copies of different selected parts of the text are transferred to the peripheral surface of said offset roller means during successive revolutions of said printing roller;

means acting on said offset roller means during each revolution of said printing roller for moving the respective newly made copy of a text part relative to the peripheral surface of said printing roller in circumferential direction of said offset roller means so that during the following revolution of said printing roller the copy of a different text part is made on an unused clean portion of the peripheral surface of said offset roller means; counterpressure roller means cooperating with said offset roller means; means for feeding a copy sheet to the printing line between said offset roller means and counterpressure roller means after each revolution of said printing roller; and means for causing rolling movement of said offset roller means on successive copy sheets so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller means.

3. An offset printing machine comprising, in combination, printing roller means including a printing roller, means for movably holding a printing form on the peripheral surface of said printing roller, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form; control means for actuating said transporting means after a revolution of said printing roller so that the printing form is shifted; offset roller means cooperating with said printing roller; transmission means connecting said printing roller and said offset roller means for rotation in timed relation; means for effecting rolling engagement between said offset roller means and selected parts only of said printing form located on selected segments of said peripheral surface of said printing roller so that copies of different selected parts of the text are transferred to the peripheral surface of said offset roller means during successive revolutions of said printing roller; displacing means for turning said offset roller means during each revolution of said printing roller relative to said printing roller means for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller means; means for feeding a copy sheet to said offset roller after each revolution of said printing roller; and means for causing rolling movement of said offset roller means on copy sheets successively fed after each revolution of said printing roller so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller means.

4. An offset printing machine comprising, in combination, printing roller means including a printing roller, means for stationarily holding a first printing form means having a first text, and for movably holding a second printing form means having a second text on the peripheral surface of said printing roller, and transporting means for shifting said second printing form means in steps corresponding to parts of said second text; control means for actuating said transporting means after a revolution of said printing roller so that the second printing form is shifted; offset roller means cooperating with said printing roller; transmission means connecting said printing roller and said offset roller means for rotation in timed relation; means for effecting rolling engagement between said offset roller means on one hand, and said first printing form means, and selected parts only of said second printing form means on the other hand so that a copy of said first text and copies of different selected parts of the second text are transferred to the peripheral surface of said offset roller means during successive revolutions of said printing roller; means acting on said offset roller means during each revolution of said printing roller for moving the respective newly made copy of a text part relative to the peripheral surface of said printing roller in circumferential direction of said offset roller means

so that during the following revolution of said printing roller the copy of a different text part is made on an unused clean portion of the peripheral surface of said offset roller means; counterpressure roller means cooperating with said offset roller means; means for feeding a copy sheet to the printing line between said offset roller means and counterpressure roller means after each revolution of said printing roller; and means for causing rolling movement of said offset roller means on successive copy sheets so that imprints of transferred copies of different selected text parts of the second text and copies of the first text are made on different copy sheets by said offset roller means.

5. An offset printing machine comprising, in combination, printing roller means including a printing roller, means for stationarily holding a first printing form means having a first text, and for movably holding a second printing form means having a second text on the peripheral surface of said printing roller, and transporting means for shifting said second printing form means in steps corresponding to parts of said second text; control means for actuating said transporting means after a revolution of said printing roller so that the second printing form is shifted; offset roller means cooperating with said printing roller; transmission means connecting said printing roller and said offset roller means for rotation in timed relation; means for effecting rolling engagement between said offset roller means on one hand, and said first printing form means, and selected parts only of said second printing form means on the other hand so that a copy of said first text and copies of different selected parts of the second text are transferred to the peripheral surface of said offset roller means during successive revolutions of said printing roller; displacing means for turning said offset roller means during each revolution of said printing roller relative to said printing roller means for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller means; counterpressure roller means cooperating with said offset roller means; means for feeding a copy sheet to the printing line between said offset roller means and counterpressure roller means after each revolution of said printing roller; and means for causing rolling movement of said offset roller means on successive copy sheets so that imprints of transferred copies of different selected text parts of the second text and copies of the first text are made on different copy sheets by said offset roller means.

6. An offset printing machine comprising, in combination, printing roller means including a printing roller, means for movably holding a printing form on the peripheral surface of said printing roller, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form, said transporting means including a stepping mechanism and an actuating member for said stepping mechanism; control means including at least one control member for operating said actuating member of said transporting means after a revolution of said printing roller so that the printing form is shifted, said control member having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism after each revolution of said printing roller, said control means including means for shifting said control member between said positions; offset roller means cooperating with said printing roller; transmission means connecting said printing roller and said offset roller means for rotation in timed relation; means for effecting rolling engagement between said offset roller means and selected parts only of said printing form located on selected segments of said peripheral surface of said printing roller so that copies of different selected parts of the text are transferred to the peripheral

surface of said offset roller means during successive revolutions of said printing roller; means acting on said offset roller means during each revolution of said printing roller for moving the respective newly made copy of a text part relative to the peripheral surface of said printing roller in circumferential direction of said offset roller means so that during the following revolution of said printing roller the copy of a different text part is made on an unused clean portion of the peripheral surface of said offset roller means; means for feeding a copy sheet to said offset roller after each revolution of said printing roller; and means for causing rolling movement of said offset roller means on copy sheets successively fed after each revolution of said printing roller so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller means.

7. An offset printing machine comprising, in combination, printing roller means including a printing roller, means for movably holding a printing form on the peripheral surface of said printing roller, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; control means including a plurality of control members spaced about the periphery of said printing roller, each of said control members having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism during rotation of said printing roller so that said printing form is shifted, said control means including shifting means for shifting each control member independently of the other control members between said positions; selector means connected to said shifting means for selectively operating the same so that at least one selected control member is moved to said operative position; offset roller means cooperating with said printing roller; transmission means connecting said printing roller and said offset roller means for rotation in timed relation; means for effecting rolling engagement between said offset roller means and selected parts only of said printing form located on selected segments of said peripheral surface of said printing roller so that copies of different selected parts of the text are transferred to the peripheral surface of said offset roller means during successive revolutions of said printing roller; displacing means for turning said offset roller means during each revolution of said printing roller relative to said printing roller means for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller means; counter-pressure roller means cooperating with said offset roller means; means for feeding a copy sheet to the printing line between said offset roller means and counterpressure roller means after each revolution of said printing roller; and means for causing rolling movement of said offset roller means on successive copy sheets so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller means.

8. An offset printing machine as set forth in claim 7 wherein said selector means include manually operated selector switches respectively correlated with parts of the text of the printing form, and wherein said shifting means include electromagnetic means having a circuit connected with said selector switches.

9. An offset printing machine comprising, in combination, printing roller means including a hollow printing roller, means for holding a printing form including a peripheral portion located on the peripheral surface of said printing roller and an inner portion located in the interior of said printing roller, and transporting means for moving said printing form into and out of the interior of said hollow printing roller and shifting said printing form

in steps corresponding to parts of the text of the printing form, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; control means including a plurality of control members spaced about the periphery of said printing roller, each of said control members having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism during rotation of said printing roller so that said printing form is shifted, said control means including shifting means for shifting each control member independently of the other control members between said positions; selector means connected to said shifting means for selectively operating the same so that at least one selected control member is moved to said operative position; offset roller means cooperating with said printing roller; transmission means connecting said printing roller and said offset roller means for rotation in timed relation; means for effecting rolling engagement between said offset roller means and selected parts only of said printing form located on selected segments of said peripheral surface of said printing roller so that copies of different selected parts of the text are transferred to the peripheral surface of said offset roller means during successive revolutions of said printing roller; displacing means for turning said offset roller means during each revolution of said printing roller relative to said printing roller means for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller means; counterpressure roller means cooperating with said offset roller means; means for feeding a copy sheet to the printing line between said offset roller means and counterpressure roller means after each revolution of said printing roller; and means for causing rolling movement of said offset roller means on successive copy sheets so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller means.

10. An offset printing machine comprising, in combination, printing roller means including a hollow printing roller, means for stationarily holding a first printing form means having a first text, and for movably holding a second printing form means including a peripheral portion located on the peripheral surface of the printing roller and an inner portion located in the interior of said printing roller, said second printing form means having a second text, and transporting means for shifting said second printing form means in steps corresponding to parts or lines of said second text into the interior of said printing roller, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; control means including a control member for operating said actuating member of said transporting means, said control member projecting into the path of movement of said actuating member for operating the same during rotation of said printing roller so that said second printing form is shifted; an offset roller cooperating with said printing roller; a counterpressure roller cooperating with said offset roller; feeding means for feeding a copy sheet to said counterpressure roller after each revolution of said printing roller; transmission means connecting said printing roller with said offset roller for rotation in timed relationship, and including coupling means for coupling and disconnecting said offset roller and said printing roller; supporting means supporting said offset roller for movement between a transfer position in which said printing roller and said offset roller cooperate for transferring a copy of said first and second texts to the peripheral surface of said offset roller, a printing position in which said offset roller cooperates with said counterpressure roller for printing on a copy sheet said transferred copy, and a neutral position in which said rollers are spaced from each other; operating means for moving

said rollers between said positions; means for disconnecting said coupling means; and displacing means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy of said first and second texts relative to said printing form means so that during the following revolution of said printing roller, the copy of said first text and of a different part of said second text is made on an unused clean portion of the peripheral surface of said offset roller.

11. An offset printing machine comprising, in combination, printing roller means including a hollow printing roller, means for stationarily holding a first printing form means having a first text, and for movably holding a second printing form means including a peripheral portion located on the peripheral surface of the printing roller and an inner portion located in the interior of said printing roller, said second printing form means having a second text, and transporting means for shifting said second printing form means in steps corresponding to parts or lines of said second text into the interior of said printing roller, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; control means including a control member for operating said actuating member of said transporting means, said control member projecting into the path of movement of said actuating member for operating the same during rotation of said printing roller so that said second printing form is shifted; an offset roller cooperating with said printing roller; a counterpressure roller cooperating with said offset roller; feeding means for feeding a copy sheet to said counterpressure roller after each revolution of said printing roller; transmission means connecting said printing roller with said offset roller for rotation in timed relationship, and including coupling means for coupling and disconnecting said offset roller and said printing roller; supporting means supporting said offset roller for movement between a transfer position in which said printing roller and said offset roller cooperate for transferring a copy of said first and second texts to the peripheral surface of said offset roller, a printing position in which said offset roller cooperates with said counterpressure roller for printing on a copy sheet said transferred copy, and a neutral position in which said rollers are spaced from each other; operating means connected to said supporting means for moving said offset roller between said positions; means for disconnecting said coupling means; and displacing means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy of said first and second texts relative to said printing form means so that during the following revolution of said printing roller, the copy of said first text and of a different part of said second text is made on an unused clean portion of the peripheral surface of said offset roller.

12. An offset printing machine comprising, in combination, printing roller means including a hollow printing roller, means for stationarily holding a first printing form means having a first text, and for movably holding a second printing form means including a peripheral portion located on the peripheral surface of the printing roller and an inner portion located in the interior of said printing roller, said second printing form means having a second text, and transporting means for shifting said second printing form means in steps corresponding to parts or lines of said second text into the interior of said printing roller, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; control means including a plurality of control members spaced about the periphery of said printing roller, each of said control members having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism dur-

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ing rotation of said printing roller so that said second printing form is shifted, said control means including shifting means for shifting each control member independently of the other control members between said positions; selector means connected to said shifting means for selectively operating the same so that at least one selected control member is moved to said operative position; an offset roller cooperating with said printing roller; a counterpressure roller cooperating with said offset roller; feeding means for feeding a copy sheet to said counterpressure roller after each revolution of said printing roller; transmission means connecting said printing roller with said offset roller for rotation in timed relationship, and including coupling means for coupling and disconnecting said offset roller and said printing roller; supporting means supporting said rollers for movement between a transfer position in which said printing roller and said offset roller cooperate for transferring a copy of said first and second texts to the peripheral surface of said offset roller, a printing position in which said offset roller cooperates with said counterpressure roller for printing on a copy sheet said transferred copy, and a neutral position in which said rollers are spaced from each other; operating means for moving said rollers between said positions; means for disconnecting said coupling means; and displacing means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy of said first and second texts relative to said printing form means so that during the following revolution of said printing roller, the copy of said first text and of a different part of said second text is made on an unused clean portion of the peripheral surface of said offset roller.

13. An offset printing machine comprising, in combination, printing roller means including a hollow printing roller, means for stationarily holding a first printing form means having a first text, and for movably holding a second printing form means including a peripheral portion located on the peripheral surface of the printing roller and an inner portion located in the interior of said printing roller, said second printing form means having a second text, and transporting means for shifting said second printing form means in steps corresponding to parts or lines of said second text into the interior of said printing roller, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; control means including a plurality of control members spaced about the periphery of said printing roller, each of said control members having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism during rotation of said printing roller so that said second printing form is shifted, said control means including electromagnetic shifting means for shifting each control member independently of the other control members between said positions; selector means connected to said shifting means for selectively operating the same so that at least one selected control member is moved to said operative position, said selector means including manually operated selector switches respectively correlated with parts of said second text, said selector switches being respectively located in the circuits of said electro-magnetic shifting means; an offset roller cooperating with said printing roller; a counterpressure roller cooperating with said offset roller; feeding means for feeding a copy sheet to said counterpressure roller after each revolution of said printing roller; transmission means connecting said printing roller with said offset roller for rotation in timed relationship, and including coupling means for coupling and disconnecting said offset roller and said printing roller; supporting means supporting said offset roller for movement between a transfer position in which said printing roller and said offset roller cooperate for transferring

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a copy of said first and second texts to the peripheral surface of said offset roller, a printing position in which said offset roller cooperates with said counterpressure roller for printing on a copy sheet said transferred copy, and a neutral position in which said rollers are spaced from each other; operating means connected to said supporting means for moving said offset roller between said positions; means for disconnecting said coupling means; and displacing means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy of said first and second texts relative to said printing form means so that during the following revolution of said printing roller, the copy of said first text and of a different part of said second text is made on an unused clean portion of the peripheral surface of said offset roller.

14. An offset printing machine as set forth in claim 13 and including a stationary contact member having a plurality of contact buttons respectively connected with said selector switches, and a contact arm connected to said printing roller for rotation in timed relationship and having contact means successively engaging said contact buttons; wherein said operating means include electromagnetic means connected to said contact buttons, and wherein said contact means is connected into the circuit of said electromagnetic means for energizing the same when said contact means engages a contact button whose associated selector switch is actuated.

15. An offset printing machine as set forth in claim 14 wherein said supporting means includes lever means, and wherein said electromagnetic means of said operating means includes two electromagnetic members connected to said lever means for shifting the same in opposite directions between two end positions in which said offset roller is in said transfer position and in said printing position, respectively, and spring means urging said lever means to an intermediate position in which said offset roller is in said neutral position so that said lever means move to said intermediate position when said electromagnetic members are both de-energized.

16. An offset printing machine comprising, in combination, printing roller means including a printing roller having a plurality of axially extending pressure segments having pressure faces forming parts of the peripheral surface of said printing roller, means mounting said pressure segments for individual movement between an inner, inoperative position and an outer, impression-producing position, means for holding a printing form having a text thereon for movement in circumferential direction over said pressure faces, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form and to the circumferential extension of said pressure faces; control means for actuating said transporting means after each revolution of said printing roller so that said printing form is shifted; an offset roller cooperating with said printing roller in such a manner that parts of said printing form located on said pressure faces of pressure segments in said image-producing position only engage the peripheral surface of said offset roller and transfer copies of selected parts of the text of the printing form to the same while parts of the printing form located on pressure segments in said inoperative position and on other peripheral surface portions of said printing roller remain spaced from said offset roller, copies of different selected parts of the text being transferred during successive revolutions of said printing roller due to the shifting of the printing form; means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clear portion of the peripheral surface of said offset roller; counter-

pressure roller means cooperating with said offset roller means; supporting means supporting said offset roller and said counterpressure roller for movement between a printing position forming a printing line and a neutral spaced position; means for feeding a copy sheet to said printing line after each revolution of said printing roller; and operating means for moving said offset roller and said counterpressure roller between said positions so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller.

17. An offset printing machine comprising, in combination, printing roller means including a printing roller having a plurality of axially extending pressure segments having pressure faces forming parts of the peripheral surface of said printing roller, means mounting said pressure segments for individual movement between an inner, inoperative position and an outer, impression-producing position, means for holding a printing form having a text thereon for movement in circumferential direction over said pressure faces, and transporting means for shifting said printing form in steps corresponding to part of the text of the printing form and to the circumferential extension of said pressure faces; control means for actuating said transporting means after each revolution of said printing roller so that said printing form is shifted; an offset roller cooperating with said printing roller in such a manner that parts of said printing form located on said pressure faces of pressure segments in said image-producing position only engage the peripheral surface of said offset roller and transfer copies of selected parts of the text of the printing form to the same while parts of the printing form located on pressure segments in said inoperation position and on other peripheral surface portions of said printing roller remain spaced from said offset roller, copies of different selected parts of the text being transferred during successive revolutions of said printing roller due to the shifting of the printing form; means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller; counter-pressure roller means cooperating with said offset roller means; supporting means supporting said offset roller for movement between a transfer position in which said offset roller cooperates with said printing roller so that said pressure faces engage the peripheral surface of said offset roller and a printing position in which said pressure faces are spaced from said offset roller and in which printing position said offset roller forms a printing line with said counterpressure roller; means for feeding a copy sheet to said printing line after each revolution of said printing roller; and operating means for moving said supporting means and thereby said offset roller between said transfer and printing positions so that first copies of selected parts of the text are transferred to said offset roller whereupon imprints of transferred copies are made on a copy sheet located in said printing line, and so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller.

18. An offset printing machine comprising, in combination, printing roller means including a printing roller having a plurality of axially extending pressure segments having pressure faces forming parts of the peripheral surface of said printing roller, means mounting said pressure segments for individual movement between an inner, inoperative position and an outer, impression-producing position, means for holding a printing form having a text thereon for movement in circumferential direction over said pressure faces, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form and to the circumferential ex-

tension of said pressure faces, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; control means including a plurality of control members spaced about the periphery of said printing roller for operating said actuating member of said transporting means, each of said control members having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism during rotation of said printing roller so that said printing form is shifted, and a plurality of shifting means for shifting each control member independently of the other control members between said positions; selector means connected to said shifting means for selectively operating the same so that at least one selected control member is moved to said operative position; an offset roller cooperating with said printing roller in such a manner that parts of said printing form located on said pressure faces of pressure segments in said image-producing position only engage the peripheral surface of said offset roller and transfer copies of selected parts of the text of the printing form to the same while parts of the printing form located on pressure segments in said inoperative position and on other peripheral surface portions of said printing roller remain spaced from said offset roller, copies of different selected parts of the text being transferred during successive revolutions of said printing roller due to the shifting of the printing form; means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respectively newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller; counterpressure roller means cooperating with said offset roller means; supporting means supporting said offset roller for movement between a transfer position in which said offset roller cooperates with said printing roller so that said pressure faces engage the peripheral surface of said offset roller and a printing position in which said pressure faces are spaced from said offset roller and in which printing position said offset roller forms a printing line with said counterpressure roller; means for feeding a copy sheet to said printing line after each revolution of said printing roller; and operating means for moving said supporting means and thereby said offset roller between said transfer and printing positions so that first copies of selected parts of the text are transferred to said offset roller whereupon imprints of transferred copies are made on a copy sheet located in said printing line, and so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller.

19. An offset printing machine comprising, in combination, printing roller means including a printing roller having a plurality of axially extending pressure segments having pressure faces forming parts of the peripheral surface of said printing roller, means mounting said pressure segments for individual movement between an inner, inoperative position and an outer, impression-producing position, means for holding a printing form having a text thereon for movement in circumferential direction over said pressure faces, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form and to the circumferential extension of said pressure faces, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; control means including a plurality of control members spaced about the periphery of said printing roller for operating said actuating member of said transporting means, each of said control members having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism during rotation

of said printing roller so that said printing form is shifted, and a plurality of electromagnetic shifting means for shifting each control member independently of the other control members between said positions; selector means connected to said shifting means for selectively operating the same so that at least one selected control member is moved to said operative position, said selector means including manually operated switches respectively correlated with parts of said text, said selector switches being respectively located in the circuits of said electromagnetic shifting means; an offset roller cooperating with said printing roller in such a manner that parts of said printing form located on said pressure faces of pressure segments in said image-producing position only engage the peripheral surface of said offset roller and transfer copies of selected parts of the text of the printing form to the same while parts of the printing form located on pressure segments in said inoperative position and on other peripheral surface portions of said printing roller remain spaced from said offset roller, copies of different selected parts of the text being transferred during successive revolutions of said printing roller due to the shifting of the printing form; means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy relative to the peripheral surface of the printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller; counterpressure roller means cooperating with said offset roller means; supporting means supporting said offset roller for movement between a transfer position to which said offset roller cooperates with said printing roller so that said pressure faces engage the peripheral surface of said offset roller and a printing position in which said pressure faces are spaced from said offset roller and in which printing position said offset roller forms a printing line with said counterpressure roller; means for feeding a copy sheet to said printing line after each revolution of said printing roller; and operating means for moving said supporting means and thereby said offset roller between said transfer and printing positions so that first copies of selected parts of the text are transferred to said offset roller whereupon imprints of transferred copies are made on a copy sheet located in said printing line, and so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller.

20. An offset printing machine comprising, in combination, printing roller means including a printing roller having a plurality of axially extending pressure segments having pressure faces forming parts of the peripheral surface of said printing roller, means mounting said pressure segments for individual movement between an inner, inoperative position and an outer, impression-producing position, means for holding a printing form having a text thereon for movement in circumferential direction over said pressure faces, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form and to the circumferential extension of said pressure faces; operator controlled means for selectively shifting said pressure segments between said inoperative and outer impression-producing positions; control means for actuating said transporting means after each revolution of said printing roller so that said printing form is shifted; an offset roller cooperating with said printing roller in such a manner that parts of said printing form located on said pressure faces of pressure segments in said image-producing position only engage the peripheral surface of said offset roller and transfer copies of selected parts of the text of the printing form to the same while parts of the printing form located on pressure segments in said inoperative position and on other peripheral surface portions of said printing roller remain spaced from said

offset roller copies of different selected parts of the text being transferred during successive revolutions of said printing roller due to the shifting of the printing form; means for feeding a copy sheet to said offset roller after each revolution of said printing roller; and means for causing rolling movement of said offset roller on copy sheets successively fed after each revolution of said printing roller so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller.

21. An offset printing machine comprising, in combination, printing roller means including a printing roller having a plurality of axially extending pressure segments having pressure faces forming parts of the peripheral surface of said printing roller, means mounting said pressure segments for individual movement between an inner, inoperative position and an outer, impression-producing position, means for holding a printing form having a text thereon for movement in circumferential direction over said pressure faces, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form and to the circumferential extension of said pressure faces, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; operator controlled means for selectively shifting said pressure segments between said inoperative and outer impression-producing position; control means including a plurality of control members spaced about the periphery of said printing roller for operating said actuating member of said transporting means, each of said control members having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism during rotation of said printing roller so that said printing form is shifted, and a plurality of shifting means for shifting each control member independently of the other control members between said positions; selector means connected to said shifting means for selectively operating the same so that at least one selected control member is moved to said operative position; an offset roller cooperating with said printing roller in such a manner that parts of said printing form located on said pressure faces of pressure segments in said image-producing position only engage the peripheral surface of said offset roller and transfer copies of selected parts of the text of the printing form to the same while parts of the printing form located on pressure segments in said inoperative position and on other peripheral surface portions of said printing roller remain spaced from said offset roller, copies of different selected parts of the text being transferred during successive revolutions of said printing roller due to the shifting of the printing form; means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller; counterpressure roller means cooperating with said offset roller means; supporting means supporting said offset roller for movement between a transfer position in which said offset roller cooperates with said printing roller so that said pressure faces engage the peripheral surface of said offset roller and a printing position in which said pressure faces are spaced from said offset roller and in which printing position said offset roller forms a printing line with said counterpressure roller; means for feeding a copy sheet to said printing line after each revolution of said printing roller; and operating means for moving said supporting means and thereby said offset roller between said transfer and printing positions so that first copies of selected parts of the text are transferred to said offset roller whereupon imprints of transferred copies are made on a copy sheet located in said printing line, and so that imprints of trans-

ferred copies of different selected text parts are made on different copy sheets by said offset roller.

22. An offset printing machine as set forth in claim 21 and including a stationary contact member having a plurality of contact buttons respectively connected with said selector switches, and a contact arm connected to said printing roller for rotation in timed relationship and having contact means successively engaging said contact buttons; wherein said operating means including electromagnetic means connected to said contact buttons, and wherein said contact means is connected into the circuit of said electromagnetic means for energizing the same when said contact means engages a contact button whose associated selector switch is actuated.

23. An offset printing machine comprising, in combination, printing roller means including a printing roller having a plurality of axially extending pressure segments having pressure faces forming parts of the peripheral surface of said printing roller, means mounting said pressure segments for individual movement between an inner, inoperative position and an outer, impression-producing position, means for holding a printing form having a text thereon for movement in circumferential direction over said pressure faces, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form and to the circumferential extension of said pressure faces, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; operator controlled means for selectively shifting said pressure segments between said inoperative and outer impression-producing position; means connecting said printing roller with said offset roller for rotation in timed relationship, and including coupling means for disconnecting said offset roller from said printing roller; control means including a plurality of control members spaced about the periphery of said printing roller for operating said actuating member of said transporting means, each of said control members having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism during rotation of said printing roller so that said printing form is shifted, and a plurality of shifting means for shifting each control member independently of the other control members between said positions; selector means connected to said shifting means for selectively operating the same so that at least one selected control member is moved to said operative position; an offset roller cooperating with said printing roller in such a manner that parts of said printing form located on said pressure faces of pressure segments in said image-producing position only engage the peripheral surface of said offset roller and transfer copies of selected parts of the text of the printing form to the same while parts of the printing form located on pressure segments in said inoperative position and on other peripheral surface portions of said printing roller remain spaced from said offset roller, copies of different selected parts of the text being transferred during successive revolutions of said printing roller due to the shifting of the printing form; means for disconnecting said coupling means, and for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller; counterpressure roller means cooperating with said offset roller means; supporting means supporting said offset roller for movement between a transfer position in which said offset roller cooperates with said printing roller so that said pressure faces engage the peripheral surface of said offset roller and a printing position in which said pressure faces are spaced from said offset roller and in which printing position said offset roller forms a printing line with said counter-pressure roller; means for feeding a copy sheet to said printing

line after each revolution of said printing roller; and operating means for moving said supporting means and thereby said offset roller between said transfer and printing positions so that first copies of selected parts of the text are transferred to said offset roller whereupon imprints of transferred copies are made on a copy sheet located in said printing line, and so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller.

24. An offset printing machine comprising, in combination, printing roller means including a hollow printing roller having a plurality of axially extending pressure segments having pressure faces forming parts of the peripheral surface of said printing roller, means mounting said pressure segments for individual movement between an inner, inoperative position and an outer, impression-producing position, and another pressure face permanently located in an impression-producing position, means for stationarily holding a first printing form means having a first text on said other pressure face, and for holding a second printing form means including a peripheral portion located on the peripheral surface of said printing roller and on said pressure faces of said segments for movement in circumferential direction over the same, said second printing form means including an inner portion located in the interior of said printing roller, said second printing form means having a second text thereon having text parts having the same circumferential extension as said pressure faces, and transporting means for shifting said second printing form means in steps corresponding to parts of the text of the printing form and to the circumferential extension of said pressure faces, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; operator controlled means for selectively shifting said pressure segments between said inoperative and outer impression-producing position; control means including a plurality of control members spaced about the periphery of said printing roller for operating said actuating member of said transporting means, each of said control members having an inoperative position and an operative position projecting into the path of movement of said actuating member for operating the same and said mechanism during rotation of said printing roller so that said second printing form means is shifted, and a plurality of shifting means for shifting each control member independently of the other control members between said positions; selector means connected to said shifting means for selectively operating the same so that at least one selected control member is moved to said operative position; an offset roller cooperating with said printing roller in such a manner that parts of said second printing form means located on said pressure faces of pressure segments in said image-producing position and said first printing form means only engage the peripheral surface of said offset roller and transfer copies of selected parts of said second text, and said first text to the same while parts of the second printing form means located on pressure segments in said inoperative position and on other peripheral surface portions of said printing roller remain spaced from said offset roller, copies of different selected parts of said second text being transferred during successive revolutions of said printing roller due to the shifting of the second printing form means; means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller; counter-pressure roller means cooperating with said offset roller means; supporting means supporting said offset roller for movement between a transfer position in which said offset roller cooperates with said printing roller so that said pressure faces engage the peripheral surface of said offset

roller and a printing position in which said pressure faces are spaced from said offset roller and in which printing position said offset roller forms a printing line with said counterpressure roller; means for feeding a copy sheet to said printing line after each revolution of said printing roller; and operating means for moving said supporting means and thereby said offset roller between said transfer and printing positions so that first copies of selected parts of said second text are transferred to said offset roller whereupon imprints of transferred copies are made on a copy sheet located in said printing line, and so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller.

25. An offset printing machine comprising, in combination, printing roller means including a printing roller, means for movably holding a printing form on the peripheral surface of said printing roller, and transporting means for shifting said printing form in steps corresponding to parts of the text of the printing form; control means for actuating said transporting means after a revolution of said printing roller so that the printing form is shifted; offset roller means cooperating with said printing roller; transmission means connecting said printing roller and said offset roller means for rotation in timed relation, and including coupling means having a coupling position and a released position; means for effecting rolling engagement between said offset roller means and selected parts only of said printing form located on selected segments of said peripheral surface of said printing roller so that copies of different selected parts of the text are transferred to the peripheral surface of said offset roller means during successive revolutions of said printing roller; means driven in synchronism with said printing roller means for moving said coupling means to said released position after transfer of a selected text part to said offset roller means; displacing means driven in synchronism with said printing roller means for turning said offset roller means during each revolution of said printing roller and while said coupling means is in said released position relative to said printing roller means for moving the respective newly made copy relative to the peripheral surface of said printing roller so that during the following revolution of said printing roller, the copy is made on an unused clean portion of the peripheral surface of said offset roller means; means for feeding a copy sheet to said offset roller after each revolution of said printing roller; and means for causing rolling movement of said offset roller means on copy sheets successively fed after each revolution of said printing roller so that imprints of transferred copies of different selected text parts are made on different copy sheets by said offset roller means.

26. An offset printing machine as set forth in claim 25 wherein said displacing means includes a wheel, resilient means connecting said wheel with said offset roller means, means for locking said wheel only when said offset roller means cooperates with said printing form so that said resilient means is tensioned while said offset roller means turns in one direction, and turns said offset roller means in the opposite direction when said offset roller means moves away from said printing form to roll on said copy sheet.

27. An offset printing machine comprising, in combination, printing roller means including a hollow printing roller, means for stationarily holding a first printing form means having a first text, and for movably holding a second printing form means including a peripheral portion located on the peripheral surface of the printing roller and an inner portion located in the interior of said printing roller, said second printing form means having a second text, and transporting means for shifting said second printing form means in steps corresponding to parts or lines of said second text into the interior of said printing roller, said transporting means including a stepping mechanism, and an actuating member for said stepping mechanism; control means including a control member for operating said actuating member of said transport-

ing means, said control member projecting into the path of movement of said actuating member for operating the same during rotation of said printing roller so that said second printing form is shifted; an offset roller cooperating with said printing roller; a counterpressure roller cooperating with said offset roller; feeding means for feeding a copy sheet to said counterpressure roller after each revolution of said printing roller; transmission means connecting said printing roller with said offset roller for rotation in timed relationship, and including coupling means for coupling and disconnecting said offset roller and said printing roller; supporting means supporting said offset roller for movement between a transfer position in which said printing roller and said offset roller cooperate for transferring a copy of said first and second texts to the peripheral surface of said offset roller, a printing position in which said offset roller cooperates with said counterpressure roller for printing on a copy sheet said transferred copy, and a neutral position in which said rollers are spaced from each other; operating means connected to said supporting means for moving said offset roller between said positions; means for disconnecting said coupling means in timed relation with the rotation of said printing roller; and displacing means for turning said offset roller after each revolution of said printing roller relative to the same for moving the respective newly made copy of said first and second texts relative to said printing form means so that during the following revolution of said printing roller, the copy of said first text and of a different part of said second text is made on an unused clean portion of the peripheral surface of said offset roller, said displacing means including a locking wheel concentric with said offset roller, a first abutment on said wheel, a second abutment on said offset roller, spring means connecting said wheel and said offset roller so that said abutments normally abut each other, a locking member engaging and locking said locking wheel in said transfer position, and releasing said locking wheel in said neutral and printing positions, so that said spring means is tensioned while said offset roller means turns in one direction during transfer of said copy and turns said offset roller means when said coupling means is disconnected in the opposite direction until said abutments abut each other in a position in which said offset roller is angularly displaced relative to said printing roller.

28. An offset printing machine as set forth in claim 27 and including one way coupling means connecting said offset roller with said locking wheel.

29. An offset printing machine as set forth in claim 27 wherein said coupling means include a ratchet wheel driven from said printing roller means, and a ratchet pawl cooperating with said ratchet wheel and secured to said offset roller.

30. An offset printing machine as set forth in claim 29 and including releasing means, and means for actuating the same in synchronism with the rotation of said printing roller to move said ratchet pawl to a position releasing said ratchet wheel so that said spring means turns said offset roller.

31. An offset printing machine as set forth in claim 30 and including a stationary contact member having a plurality of contact buttons and a contact member and a contact arm connected to said printing roller for rotation in timed relationship and having contact means successively engaging said contact buttons; wherein said operating means include electromagnetic means connected to said contact buttons, and wherein said contact means is connected into the circuit of said electromagnetic means for energizing the same when said contact means engages a contact button, and including other electromagnetic means for operating said releasing means and connected to said contact member and to said contact means.

32. An offset printing machine as set forth in claim 31 wherein said electromagnetic means of said operating means includes two electromagnetic members connected

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to said supporting means for shifting the same in opposite directions between two end positions in which said offset roller is in said transfer position and in said printing position, respectively, and spring means urging said supporting means to an intermediate position in which said offset roller is in said neutral position so that said supporting means move to said intermediate position when said electromagnetic members are both de-energized.

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