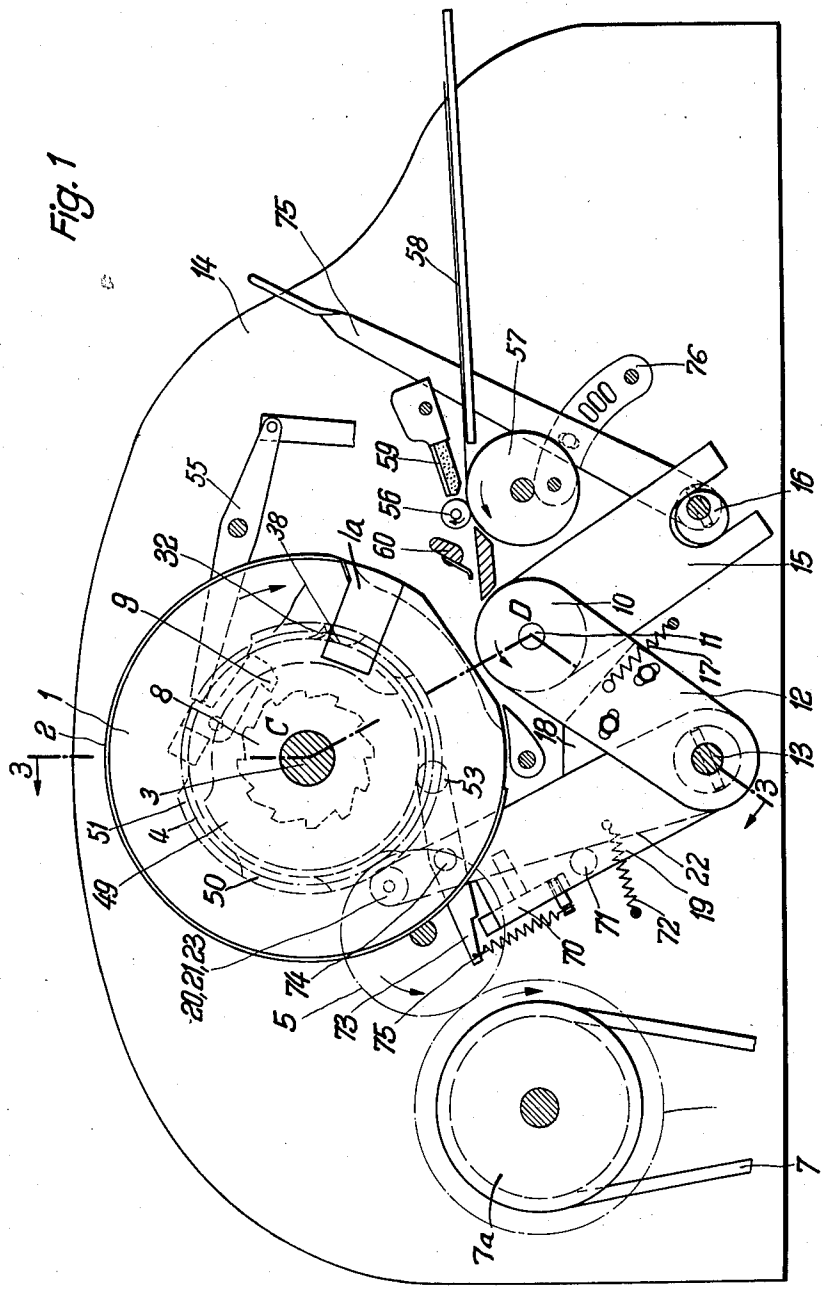
Jan. 10, 1961 W. RITZERFELD ET AL 2,967,477

APPARATUS FOR VARYING THE LENGTH OF A PRINTED SECTION OF A PRINTING FORM

Filed April 17, 1959 4 Sheets-Sheet 1

Fig. 1



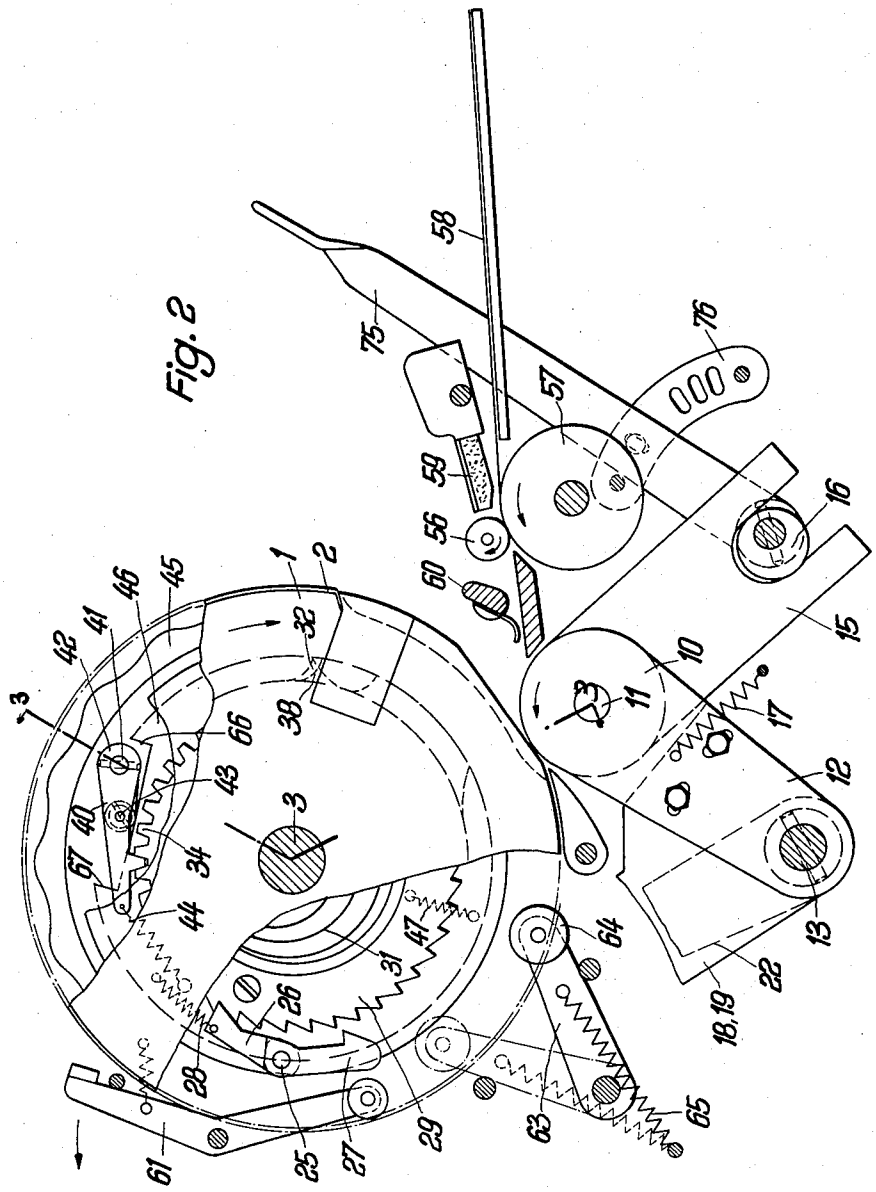
Inventors:
Wilhelm Ritzerfeld
Gerhard Ritzerfeld
By Michael S. Striker
Attorney

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APPARATUS FOR VARYING THE LENGTH OF A PRINTED SECTION OF A PRINTING FORM

Filed April 17, 1959 4 Sheets-Sheet 2

Fig. 2



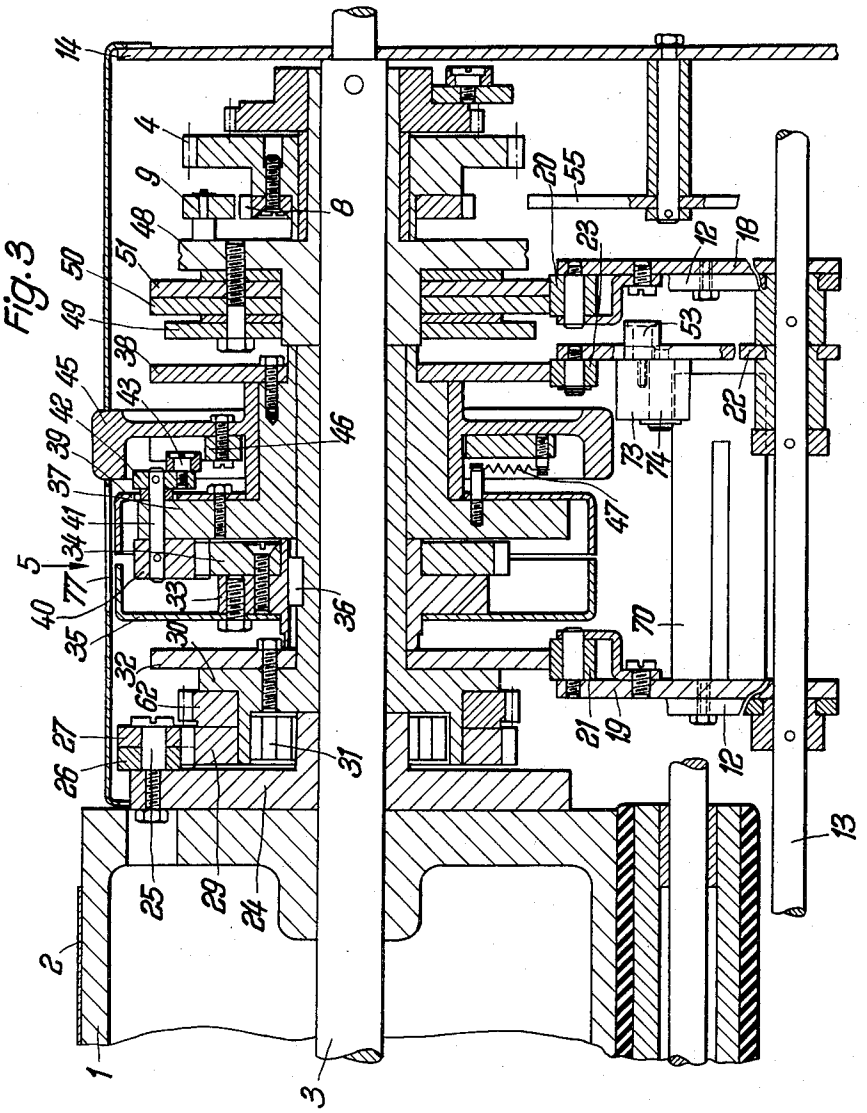
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Wilhelm Ritzerfeld
Gerhard Ritzerfeld
By Michael S. Striker
Attorney

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APPARATUS FOR VARYING THE LENGTH OF A PRINTED SECTION OF A PRINTING FORM

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Fig. 3



Inventors:
Wilhelm Ritzerfeld
Gerhard Ritzerfeld
By Michael S. Striker
Attorney

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APPARATUS FOR VARYING THE LENGTH OF A PRINTED SECTION OF A PRINTING FORM

Filed April 17, 1959 4 Sheets-Sheet 4

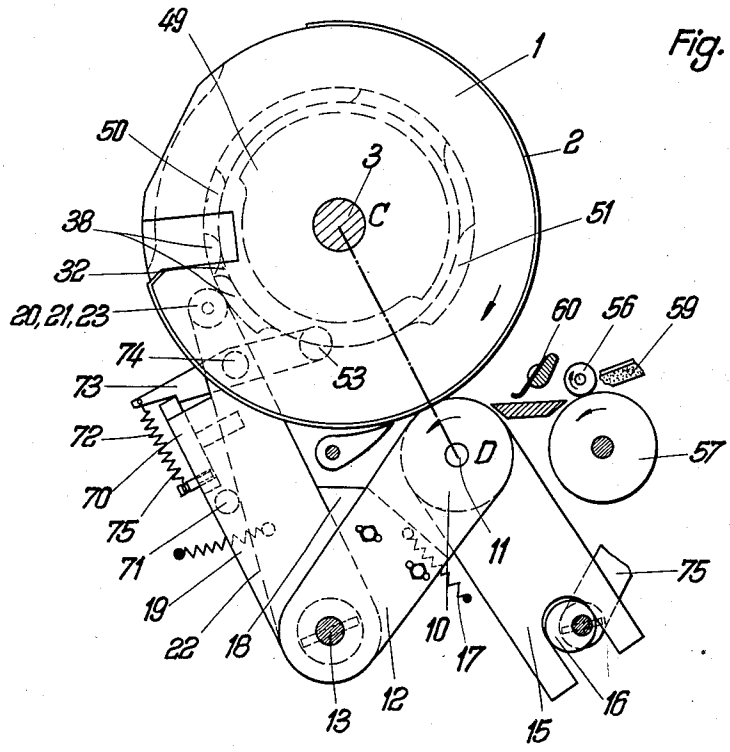


Fig. 4

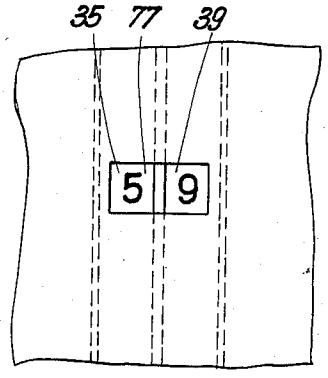


Fig. 5

Inventors:
Wilhelm Ritzerfeld
Gerland Ritzerfeld
BY Michael S Striker
Attorney

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APPARATUS FOR VARYING THE LENGTH OF A PRINTED SECTION OF A PRINTING FORM

Wilhelm Ritzerfeld, Schorlemer Allee 14, Berlin-Dahlem, Germany, and Gerhard Ritzerfeld, Franzensbader Str. 21, Berlin-Grunewald, Germany

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20 Claims. (Cl. 101—132.5)

The present invention relates to an apparatus for varying the length of a printed section of a printing form, and more particularly to a duplicating machine provided with apparatus for printing selected line sections of a printing form and including manually operable means for varying the length of such printed sections.

The present invention is particularly advantageously applied to rotary duplicating machines in which a counter pressure roller is moved to a printing position in close proximity to the duplicating roller whenever a desired section of the printing form passes through the printing line. The copy sheet is held stationary while the counter pressure roller is retracted, so that consecutive imprints of spaced sections of the printing form, appear adjacent each other on the copy sheet.

It is one object of the present invention to improve machines of this type, and to provide a machine in which the length of a selected section of the printing form can be varied, so that instead of one line, or column, several lines or columns, are printed on the copy sheet.

Another object of the present invention is to provide simple means for selecting the number of lines, or columns which are to be printed on the copy sheet.

A further object of the present invention is to provide manually operated means for determining the number of lines of a printed section.

A further object of the present invention is to provide indicating means for indicating the first and last line, or column, of the printed section of the printing form.

The main object of the present invention is to provide an apparatus by which the length of a printed section of a printing form can be selected by a rapid manual operation requiring neither mechanical skill nor tools.

With these objects in view, the present invention mainly consists in apparatus for varying the length of a printed section of a printing form. On embodiment comprises rotary printing roller means on which a printing form is supported; rotary counter pressure roller means movable to and from a printing position in close proximity to the printing roller means and defining with the same a printing line; first operating means, preferably lever means, connected to the counter pressure roller means and moving with the same to and from the printing position; first control means, preferably a turnable cam connected to the printing roller means for actuating the first operating means while the printing roller means turns through a small angle and while a narrow section of the printing form passes through the printing line; second operating means, preferably lever means; coupling means for coupling the second operating means to the movable roller means, for example through the first operating means, and being preferably actuated by the first operating means while the counter pressure roller means is in printing position; second control means, preferably cam means having a longer dwell for actuating the second operating means; and means for connecting the second control means in a plurality of relatively displaced positions to the first control means. In this manner, the second control means is effective during each revolution of the printing roller means to move the counter pressure roller

means to the printing position while the printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line. Consequently, in addition to the narrow section, which would be printed under control of the first control means, at least a part of a wider section is printed on the printing form under control of the second control means. By adjusting the relative position between the first and second control means, the length of the effective part of the second control means can be adjusted, whereby the number of lines printed on the printing form is determined.

In the preferred embodiment of the present invention in which the first and second control means are cams, the effective dwell portions of the two cams overlap, and the extent of overlapping can be adjusted by turning the second control cam relative to the first control cam, whereupon the two control cams are again completed for rotation.

Means are also provided for selecting the position of the first control cam means relative to the printing roller means, whereby a printed line of the printing form can be selected. By corresponding turning of the second control cam, the number of lines printed in addition and successive to the printing of the selected line can be determined.

In the preferred embodiment of the present invention, the second control cam is connected to the first control cam by an arresting wheel and an arresting pawl. Manually turnable means are provided which are connected by a spring to the second control cam so that the same can be turned when the arresting pawl is released. Such release of the arresting pawl is effected by a cam secured to the manually turnable means so that by turning the same through a small angle, the arresting pawl is released, whereupon the second control cam is turned through the connecting spring. When the manually turnable means is released, the spring urges it to a normal position in which the cam permits return of the arresting pawl to arresting position connecting the first and second control cam means in a relatively turned position.

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 fragmentary side view illustrating an apparatus according to the present invention;

Fig. 2 is an enlarged view of a part of Fig. 1, with portions and parts omitted for the sake of clarity, and showing other parts omitted in Fig. 1;

Fig. 3 is a fragmentary sectional view taken on line 3—3 in Fig. 1;

Fig. 4 is a fragmentary side view illustrating another operational position of the apparatus; and

Fig. 5 is a fragmentary view illustrating the indicating means and taken in direction of the arrow 5 in Fig. 3.

Referring now to the drawings, the printing machine is illustrated as a rotary duplicator including a printing roller 1 on which a printing form is held by a clamping means 1a. The printing roller 1 is secured to a rotary shaft 3, and is driven from a motor, not shown, through a belt 7 passing over a wheel 7a which is connected to a gear 6 for rotation. Gear 6 meshes with a gear 5 which meshes with a gear 4. As shown in Figs. 1 and 3, gear 4 is connected to a single revolution clutch including a wheel 8 and a pawl 9. Consequently, the printing roller 1 stops after each revolution.

A counter pressure roller 10 is mounted on a shaft 11,

and is turnably supported on rocking lever means 12 which are fixedly secured to a shaft 13. Shaft 13 is mounted in the frame of the machine, and is fixedly connected to a first operating lever 19, while a second operating lever 22 is freely turnable on shaft 13. A third operating lever 18 is also fixed on shaft 13 and turns with the same. However, the position of levers 19 and 18 can be adjusted relative to shaft 13, since levers 12 and 18 are attached to members 12 by bolts which permit an angular adjustment of levers 19 and 18. Members 12 are fixedly secured to shaft 13.

As will be explained hereinafter in greater detail, lever 19 is associated with the printing of selected lines, lever 18 is associated with the printing of the head portion of a text on the printing form, and lever 22 is associated with the printing of additional lines to extend the printed section of the printing form. The arrangement of the operating lever means is best seen in Fig. 3.

The shaft 11 of the counter pressure roller 10 is also mounted in supporting members 15 which are provided with cutouts in which eccentric members 16 are located. Eccentric members 16 can be turned by a manually operated lever 75, as shown in Fig. 1, which can be arrested by arresting means 76 in angularly displaced positions in which the eccentric means 16 displace the counter pressure roller, together with the supporting members 12, until the counter pressure roller 10 assumes its printing position cooperating with the printing form and the printing roller along a printing line. This device is used for producing prints of the entire printing form, and is not used during the operation of the machine for printing selected sections of the printing form with which the present invention is concerned. A spring 17 is attached to supporting members 12, and urges the counter pressure roller 10 away from its printing position.

The copy sheet 58 is supplied by transporting rollers 56, 57 to the printing line between the rollers 1 and 10. Moistening means 59 moisten the copy sheet in a conventional manner, and holding means 60 hold the copy sheet stationary while the counter pressure roller 10 is retracted. In this manner, undesired portions of the printing form 2 can pass through the printing line without effecting an imprint on the copy sheet, whereas in the printing position of the counter pressure roller, the copy sheet is gripped along the printing line, and transported through the printing line while the respective section of the printing form is printed on the copy sheet. This arrangement is known, and not an object of the present invention.

A carrier plate 24 is secured to the printing roller 1, and as best seen in Figures 2 and 3, carries a pair of pawls 26 and 27 on a pin 25. Pawl 26 is loaded by a spring 28, and engages a ratchet wheel 29. A lever 21 can be operated to actuate pawl 27 and to release pawl 26 so that the ratchet wheel turns one step under control of a spiral spring 31 which acts on a member 30 which is freely turnable on shaft 3, and fixedly secured to ratchet wheel 29. A stationary actuating means 63 including a roller 64 and being under control of a spring 65 is provided, which can be moved to an operative position indicated in dash and dot lines in Fig. 2, in which roller 64 engages lever means 61 and operates the same during each revolution of the printing roller to shift ratchet wheel 29 a single step. Ratchet wheel 29 is part of a unit which is turnable on shaft 3, and includes in addition to ratchet wheel 29, a gear 62, the carrier 30, a control cam 32, a supporting member 33 connected by a key 36 to carrier 30, an indicating means 35, and an arresting wheel 34 secured to member 33 by screws. A spiral spring 31 has the inner end thereof secured to the carrier 24 which turns with the printing roller 1, and its outer end secured to carrier 30 on which ratchet wheel 29 is fixed. Consequently, when ratchet wheel 29 is released by pawl 26, spring 31 turns the entire unit with ratchet wheel 29 and carrier 30 until ratchet pawl 27 engages ratchet wheel 29 again after the unit has performed a single step. The control cam means 32 operates the cam follower roller 21 with lever 19 so that shaft 13 is rocked by cam 32 when a selected line of the printing form passes through the printing line. In this manner, support members 12 move counter pressure roller 10 to its printing position. When the means 63 operate means 61 during each revolution of the printing roller, control cam means 32 is turned one step with the ratchet wheel 29, and during each successive revolution of the printing roller, a different line of the printing form 2 is printed.

Since control cam 32 is secured by screws to carrier 30, the permanent position of control cam means 32 can be selected by placing the screws in different bores in carrier 30.

A second unit is turnably mounted on the extended hub of carrier 30, and includes a support 37, an indicating means 39 secured to support 37, and a second control cam means 38 secured by screws to support 37. Again, a plurality of threaded circumferentially spaced bores is provided permitting the setting of control cam means 38 to different turned positions. The thus selected position is as a rule permanently maintained. Support 37 has bores passing therethrough in which a pin 41 is turnably mounted. Pin 41 supports at one end thereof a coupling pawl 40, as shown in Figures 2 and 3 which under action of a spring 44 engages arresting wheel 34, which as explained above turns with the first control cam means 32. The other end of pin 41 carries fixed thereon a lever 42 having a cam follower roller 43. It is evident that by turning of lever 42, coupling pawl 40 can be retracted from arresting wheel 34 to permit relative turning between the first unit associated with carrier 30 and the first control cam means 32, and the second unit associated with the second control cam means 38.

A manually operable member 45 has a hub turnable on an extended hub portion of support 36. A cam 46 is secured by bolts to the web of the manually operable means 45. As shown in Figs. 2 and 3, a spring 47 connects threaded pins which are respectively secured to support 37 and to cam 46.

As best seen in Fig. 2, cam 46 has two circumferentially spaced raised cam portions 66 and 67 which are separated by a recess in which the cam follower roller 43 of lever 40 is normally located.

When manually operated means 45 is turned through a comparatively small angle in either direction, either cam portion 66 or cam portion 67 engages cam follower roller 43 and raises lever 42, and thereby coupling pawl 40. Consequently, arresting wheel 34 and thereby the first control cam means 32 is separated from the second control cam means 38, and from the manually operable means 45. Further turning of the manually operable means 45 will tension spring 47 until the turnable support 37 is taken along together with the coupling pawl 40, which of course remains retracted from arresting wheel 34 during such further turning movement.

However, when the manually operated means 45 is released, spring 47 turns the manually operated means 45 to its normal position relative to support 37, in which spring 47 is less tensioned. In this normal position, cam follower roller 43 falls into the recess between cam portions 66 and 67, and coupling pawl 40 again engages arresting wheel 34. However, the second unit including support 37 and the second control cam means 38 are now angularly displaced relative to the first unit including carrier 30 and the first control cam means 32.

Fixed to shaft 3 is a third unit including the carrier 48, and three cams 49, 50 and 51 mounted thereon. Normally the relative position between cams 49, 50 and 51 is determined by bolts passing through holes in the cams and being threaded into threaded bores in a flange of carrier 48. By provision of suitably spaced bores in the cams and in the carrier 48, the relative positions between the cams can be set for the normal operation.

Cams 50 and 51 cooperate with the cam follower roller 20 which is mounted on operating lever means 12, 22. Consequently, cams 50 and 51 also effect rocking of shaft 13 and movement of counter pressure roller 10 to and from the printing position.

Cam 50 has a somewhat longer dwell which is associated with the head portion of the printing form, and the relative position between the dwells of cams 50 and 32 is such that first the head section and then the selected line section of the printing form are printed. Cam 51 effects the ejection of the copy sheet since it moves counter pressure roller 10 to its operative position when the end of the printing form has passed beyond the printing line at the end of the revolution of the printing roller. Rollers 1 and 10 grip the end of the copy sheet, pull it out of holding means 60 and eject the copy sheet under control of cam 51.

Mounted on the hub portion of carrier 48, is the gear 4 which carries the toothed wheel 8 of the single revolution clutch means. The corresponding coupling pawl 9, is mounted on the flange of carrier 48, as best seen in Figs. 1 and 3. A lever 55 can be manually operated to actuate the single revolution clutch 8, 9 by moving coupling pawl 9 to an operative position engaging wheel 8 during a single revolution after which coupling pawl 9 is again disengaged from wheel 8 by lever 55.

Indicating means 35 turns with cam 32, and indicates through a window 77, see Fig. 3, the line selected from the printing form for printing under control of cam 32 and control lever means 19. Indicating means 39 has indicia also appearing in window 77, and indicating the last line of the section of the printing form which is printed under control of the second control cam means 38. When the manually operated control means 45 is turned to turn support 37 with indicating means 39 relative to indicating means 35, the indication visible in the window 77 changes only for the indicating means 39. Fig. 5 illustrates the indication in the window 77.

The first operating lever means 12, 19 carry an elongated bar 70 projecting in axial direction of shaft 13 toward the second operating lever means 22. Operating lever means 22 is urged by spring 72 against a stop 71 and carries on a pin 74 a turnable coupling part 73 which under action of spring 75 tends to engage the second coupling part 70 on the first operating lever means 19. A cam follower roller 53 at the end of coupling part 5 cooperates with an actuating cam 49 which, as explained above, is mounted on carrier 48 and turns with shaft 3. When roller 21 of control lever means 19 runs on the dwell of the first control cam means 32, coupling part 70 is moved into a position in which the second coupling part 5 can snap into the coupling position shown in Fig. 4. In this position, the second operating lever means 22, which is otherwise freely turnable on shaft 3, is coupled to the first operating lever means 19, so that the raised portions of cam 38 are also effective to rock shaft 13, and to move counter pressure roller 10 to and from its printing position.

The raised cam portion of the second control cam means 38 is longer than the raised cam portion of the first control cam means 32. For example, the raised cam portion of cam 32 will move counter pressure roller 10 to its printing position while a line of the printing form passes through the printing line, so that this line is printed. On the other hand, the longer cam portion of the second control cam means 38 will hold the counter pressure roller 10 in the printing position while several lines pass through the printing line. By operation of the manually operable means 45, the relative positions between the first control cam means 32, and the second control cam means 38 is so adjusted that the longer cam portion of cam 38 forms an extension of the short cam portion of cam 32. The length of such extension is determined by the relative position of cams 32 and 38.

By turning the two cams relative to each other, the overlap of the effective cam portions of cams 32 and 38 can be determined, and in this manner instead of printing of a single line under control of cam 32, the printing of several lines is effected under the combined control of cams 32 and 38. However, since the coupling means 40 and 34 connect the two cams, the automatic operation of cam 32 by means 63, 61, 26, 27, 29 and 31 will also effect automatic operation of the second control cam means 38, so that during each consecutive revolution, a different group of lines is printed.

At the end of the revolution of the printing roller 1, cam follower roller 53 runs onto a raised portion of cam 49, and retracts the coupling part 5 from coupling part 70. In this manner, the coupling between levers 22 and 19 is interrupted until the actuating cam 49 again releases cam follower roller 53, which takes place during the first part of the next following revolution, preferably during passage of the raised portion of the head cam 50 over cam follower roller 20.

The apparatus operates in the following manner:

First, the head cam 50, and the line cam 32 are set in proper positions for printing the head portion and a selected line portion of the printing form. The line cam 32 can be set by operation of member 61 which releases pawl 27 so that ratchet wheel 29 turns stepwise under the action of spiral spring 31 together with cam 32. The manually operated means 45 is turned to first disconnect the coupling pawl 40 from the arresting wheel 34, and to then turn support 37 with line extension cam 38 relative to cam 32 until the effective cam portions of cams 32 and 38 overlap to the extent necessary for printing the desired number of lines of the printing form. Upon release of the manually operable means 45, the coupling pawl 40 again engages arresting wheel 34, so that upon turning of the ratchet wheel 29 with cam 32, support 37 with cam 38 is also turned.

When the motor is started, operation of lever 55 actuates the single revolution clutch 8, 9 and effects turning of the carrier 48 together with shaft 3 and printing roller 1. The unit associated with carrier 30 and control cam 32 is turned by pawl 26 and ratchet wheel 29, and the unit associated with support 37 and cam 38 is turned through arresting wheel 34 and coupling pawl 40.

First the head cam 50 is effective to turn lever 22 to the position in which counter pressure roller 10 is in its printing position so that the head portion of the text on the printing form is printed. At the same time, actuating cam 49 releases coupling part 73, so that the same tends to move to its coupling position. However, lever 19 is still in its inoperative position in which the second coupling part 70 slidably engages the first coupling part 5.

When the respective raised cam portion of the line cam 32 engages cam follower roller 21 on lever 19, lever 19 is rocked to a position in which the coupling part 70 is located opposite a recessed shoulder in coupling part 73, permitting coupling part 73 to snap under the action of spring 75 to its coupling position engaging coupling part 70 and connecting the second control lever 22 to the first control lever 19.

Consequently when cam follower roller 21 passes beyond the raised portion of cam 32, the raised portion of cam 38 already engages the cam follower roller 23, and holds the second operating lever 22 in a pivoted position in which the first control lever 19 is also held in its operative position through the coupled parts 70 and 73. Thus, the counter pressure roller remains in its printing position until the raised cam portion of cam 38 has passed cam follower roller 23.

Near the end of the revolution of the printing roller 1, the ejector cam 51 is effective to rock the third operating lever 18 to move counter pressure roller 10 to its operative position in which the copy sheet is gripped and transported through the printing line to an ejected position.

At the same time, the cam follower roller 53 of the coupling part 73 runs onto a dwell of cam 49 and retracts the coupling part 73 to an inoperative position releasing coupling part 70 and interrupting the coupling between the first and second operating levers 19 and 22.

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 printing machines differing from the types described above.

While the invention has been illustrated and described as embodied in an apparatus for setting a printing machine to print a selected number of lines of a printing form, 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. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating means connected to said movable roller means for moving the same to and from said printing position; first control means for said first operating means connected to and operated by said printing roller means for actuating said first operating means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line; second operating means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating means to the movable roller means while said first operating means is actuated by said first control means, and being operatively connected to and actuated by one of said last-mentioned means; second control means for actuating said second operating means while said printing roller means turns through a greater angle; and means for connecting said second control means in a plurality of relatively displaced positions to said first control means so that said second control means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions.

2. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating means connected to said movable roller means for moving the same to and from said printing position; first control cam means for said first operating means connected to and operated by said printing roller means for actuating said first operating means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line; second operating means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating means to the movable roller means while said first operating means is actuated by said first control cam means, and being operatively connected to and actuated by one of said last-mentioned means; second control cam means for actuating said second operating means while said printing roller means turns through a greater angle; and means for connecting said second control cam means in a plurality of relatively turned positions to said first control cam means so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions.

3. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating means connected to said movable roller means for moving the same to and from said printing position; first control cam means for said first operating means connected to and operated by said printing roller means for actuating said first operating means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line; second operating means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating means to said first operating means and being actuated by said first operating means to move to a coupling position while said first operating means is actuated by said first control cam means and moves to a position in which said movable roller means is in said printing position whereby said first and second operating means are coupled while said first operating means is actuated by said first control cam means; second control cam means for actuating said second operating means while said printing roller means turns through a greater angle; and means for connecting said second control cam means in a plurality of relatively turnable positions to said first control cam means so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions.

4. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating lever means connected to said movable roller means for moving the same to and from said printing position; first control cam means for said first operating means connected to and operated by said printing roller means for actuating said first operating lever means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line; second operating lever means for moving said movable roller means to and from said printing position; coupling means

for coupling said second operating lever means to the movable roller means while said first operating lever means is actuated by said first control cam means, and being operatively connected to and actuated by one of said last-mentioned means; second control cam means for actuating said second operating lever means while said printing roller means turns through a greater angle; and means for connecting said second control cam means in a plurality of relatively turnable positions to said first control cam means so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions.

5. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating means connected to said movable roller means for moving the same to and from said printing position; first control cam means for said first operating means connected to and operated by said printing roller means for actuating said first operating means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line, said first control cam means having at least one short dwell; second operating means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating means to the movable roller means while said first operating means is actuated by said first control cam means, and being operatively connected to and actuated by one of said last-mentioned means; second control cam means having at least one long dwell for actuating said second operating means while said printing roller means turns through a greater angle; and means for connecting said second control cam means in a plurality of relatively turnable positions to said first control cam means in which said long dwell of said second control cam means extends said short dwell of said first control cam means for different lengths so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions.

6. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating means connected to said movable roller means for moving the same to and from said printing position; first control means for said first operating means connected to and operated by said printing roller means for actuating said first operating means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line; second operating means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating means to said first operating means while said first operating means is actuated by said first control means, and being operatively connected to and actuated by one of said last-mentioned means; second control means for actuating said second operating means while said printing roller means turns through a greater angle; and means for connecting said second control means in a plurality of relatively displaced positions to said first control means so that said second control means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions.

7. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating lever means connected to said movable roller means for moving the same to and from said printing position; first control cam means for said first operating means connected to and operated by said printing roller means for actuating said first operating lever means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line, said first control cam means having at least one short dwell; second operating lever means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating lever means to said first operating lever means and being actuated by said first operating lever means to move to a coupling position while said first operating lever means is actuated by said first control cam means; second control cam means having at least one long dwell for actuating said second operating lever means while said printing roller means turns through a greater angle; and means for connecting said second control cam means in a plurality of relatively turnable positions to said first control cam means in which said long dwell of said second control cam means extends said short dwell of said first control cam means for different lengths so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions.

8. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating lever means connected to said movable roller means for moving the same to and from said printing position; first control cam means for said first operating means connected to and operated by said printing roller means for actuating said first operating lever means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line, said first control cam means having at least one short dwell; second operating lever means for moving said movable roller means to and from said printing position; coupling means for coupling said second operat-

ing lever means to said first operating lever means, and including a first coupling part fixedly connected to said first operating lever means, and a second coupling part movably connected to said second operating lever means, and tending to assume a coupling position; actuating cam means connected to said printing roller means for rotation therewith and releasing said second movable coupling part to move to said coupling position when said first operating lever means moves with said first coupling part to the position in which said movable roller means is in said printing position whereby said first and second operating lever means are coupled while said first operating lever means is actuated by said first control cam means; second control cam means having at least one long dwell for actuating said second operating lever means while said printing roller means turns through a greater angle; and means for connecting said second control cam means in a plurality of relatively turnable positions to said first control cam means in which said long dwell of said second control cam means extends said short dwell of said first control cam means for different lengths so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions.

9. A machine as set forth in claim 8 wherein said first coupling part is a rigid bar projecting from said first operating lever means toward said second operating lever means; wherein said second coupling part is a spring loaded member for engaging said bar; and wherein said actuating cam means operate said member to release the same in a selected position of said printing roller means, and to permit movement of said spring loaded member to said coupling position in another selected position of said printing roller means.

10. A machine as set forth in claim 1 wherein said means for connecting said first and second control means include an arresting wheel connected to one of said control means, and an arresting pawl connected to the other of said control means and tending to engage said arresting wheel for connecting said first and second control means for turning movement; and manually operable means connected to said second control means, said manually operable means including a cam cooperating with said arresting pawl for moving the same to a releasing position releasing said arresting wheel during turning movement of said manually operable means through a small angle so that during further turning of said manually operable means, only said second control means is turned relative to said first control means and to said printing roller means.

11. A machine as set forth in claim 5 wherein said means for connecting said first and second control cam means include an arresting wheel connected to said first control cam means for rotation therewith, and an arresting pawl mounted on the said second control cam means and tending to engage said arresting wheel for connecting said first and second control cam means for turning movement; and manually operable means connected to said second control cam means for turning movement, said manually operable means including a cam cooperating with said arresting pawl for moving the same to a releasing position releasing said arresting wheel during turning movement of said cam through a small angle so that during further turning of said manually operable means only said second control cam means is turned relative to said first control cam means and to said printing roller means.

12. A machine as set forth in claim 11 and including a spring connecting said manually operable means with said second control cam means, said spring permitting turning of said manually operable means through said small angle without displacement of said second control cam means, and connecting said manually operable means with said second control cam means for further turning movement through a greater turning angle.

13. A machine as set forth in claim 12 wherein said actuating cam has a two spaced raised cam portions cooperating with said arresting pawl, wherein said arresting pawl moved to a releasing position by said two cam portions, and is turned with said second control cam means relative to said arresting wheel and said first control cam means during further turning of said manually operable means, so that upon release of said manually operable means after said further turning, said spring turns said manually operable means and said actuating cam to a normal position in which a recessed portion of said cam between said two raised cam portion permits return of said arresting pawl into engagement with said arresting wheel.

14. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating means connected to said movable roller means for moving the same to and from said printing position; first control cam means for said first operating means; shiftable coupling means connecting said first control cam means with said printing roller means and being operable for connecting said first control cam means and said printing roller means in positions angularly displaced through different angles relative to each other, said first control cam means actuating said first operating means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line, said first control cam means having at least one short dwell; second operating means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating means to the movable roller means while said first operating means is actuated by said first control cam means, and being operatively connected to and actuated by one of said last-mentioned means; second control cam means having at least one long dwell for actuating said second operating means while said printing roller means turns through a greater angle; and means for connecting said second control cam means in a plurality of relatively turnable positions to said first control cam means in which said long dwell of said second control cam means extends said short dwell of said first control cam means for different lengths so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions.

15. A machine as set forth in claim 14 wherein said shiftable coupling means includes an arresting wheel connected to said first control cam means for turning movement, and coupling pawl means mounted on said printing roller means and tending to assume a coupling position engaging said arresting wheel; and releasing means on said printing roller means for releasing said coupling pawl means from said arresting wheel.

16. A machine as set forth in claim 15 and including stationary means engaging said releasing means during each revolution of the printing roller means; spring means urging said arresting wheel to turn relative to said printing roller means; stop pawl means tending to arrest said arresting wheel means after a single turning step, so that

said arresting wheel and said first and second control cam means turn a single step relative to said printing roller means after each revolution of said printing roller means.

17. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating means connected to said movable roller means for moving the same to and from said printing position; first control cam means for said first operating means connected to and operated by said printing roller means for actuating said first operating means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line, said first control cam means having at least one short dwell; first indicating means connected to said first control cam means for turning movement to indicate the respective section of the printing form; second operating means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating means to the movable roller means while said first operating means is actuated by said first control cam means, and being operatively connected to and actuated by one of said last-mentioned means; second control cam means having at least one long dwell for actuating said second operating means while said printing roller means turns through a greater angle; means for connecting said second control cam means in a plurality of relatively turnable positions to said first control cam means in which said long dwell of said second control cam means extend said short dwell of said first control cam means for different lengths so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions; and second indicating means connected to said second control cam means for indicating the respective section of the printing form.

18. A machine as set forth in claim 17 wherein said first indicating means indicate line sections of the printing form, and said second indicating means indicate the last one of a plurality of line sections forming said wider section of said printing form.

19. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, said counter pressure roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating means connected to said movable counter pressure roller means for moving the same to and from said printing position; first control cam means for said first operating means connected to and operated by said printing roller means for actuating said first operating means during each revolution of said printing roller means to move said movable counter pressure roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line, said first control cam means having at least one short dwell; second operating means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating means to the movable counter pressure roller means while said first operating means is actuated by said first control cam means, and being operatively connected to and actuated by one of said last-mentioned means; second control cam means having at least one long dwell for actuating said second operating means while said printing roller means turns through a greater angle; means for connecting said second control cam means in a plurality of relatively turnable positions to said first control cam means in which said long dwell of said second control cam means extends said short dwell of said first control cam means for different lengths so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions; and a shaft means fixedly connected to said printing roller means and turnably supporting said first control cam means and said second control cam means.

20. In a printing machine, in combination, rotary printing roller means for supporting a printing form; rotary counter pressure roller means, one of said roller means being movable to and from a printing position in close proximity to the other roller means and defining with the same a printing line; first operating lever means connected to said movable roller means for moving the same to and from said printing position; first control cam means for said first operating means connected to and operated by said printing roller means for actuating said first operating lever means during each revolution of said printing roller means to move said movable roller means to and from said printing position while said printing roller means turns through a small angle and a narrow section of the printing form passes through the printing line, said first control cam means having at least one short dwell; second operating lever means for moving said movable roller means to and from said printing position; coupling means for coupling said second operating lever means to said first operating lever means and being actuated by said first operating lever means to move to a coupling position while said first operating lever means is actuated by said first control cam means; second control cam means having at least one long dwell for actuating said second operating lever means while said printing roller means turns through a greater angle; means for connecting said second control cam means in a plurality of relatively turnable positions to said first control cam means in which said long dwell of said second control cam means extends said short dwell of said first control cam means for different lengths so that said second control cam means is effective during each revolution of said printing roller means to move said movable roller means to said printing position while said printing roller means turns through a greater angle and a wider section of the printing form passes through the printing line so that in addition to said narrow section, at least a part of said wider section is printed on the printing form, said part being different in each of the relatively turned positions; third control cam means connected to said printing roller means for rotation therewith; third operating lever means connected to said movable roller means for moving the same to and from said printing position under control of said third control cam means, said third control cam means having a dwell portion associated with the head portion of the text on the printing form and being angularly positioned relative to said first and second control cam means to operate said movable roller means through said third operating lever means before operation by said first and second operating lever means during each revolution of said printing roller means.

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