

Jan. 29, 1924.

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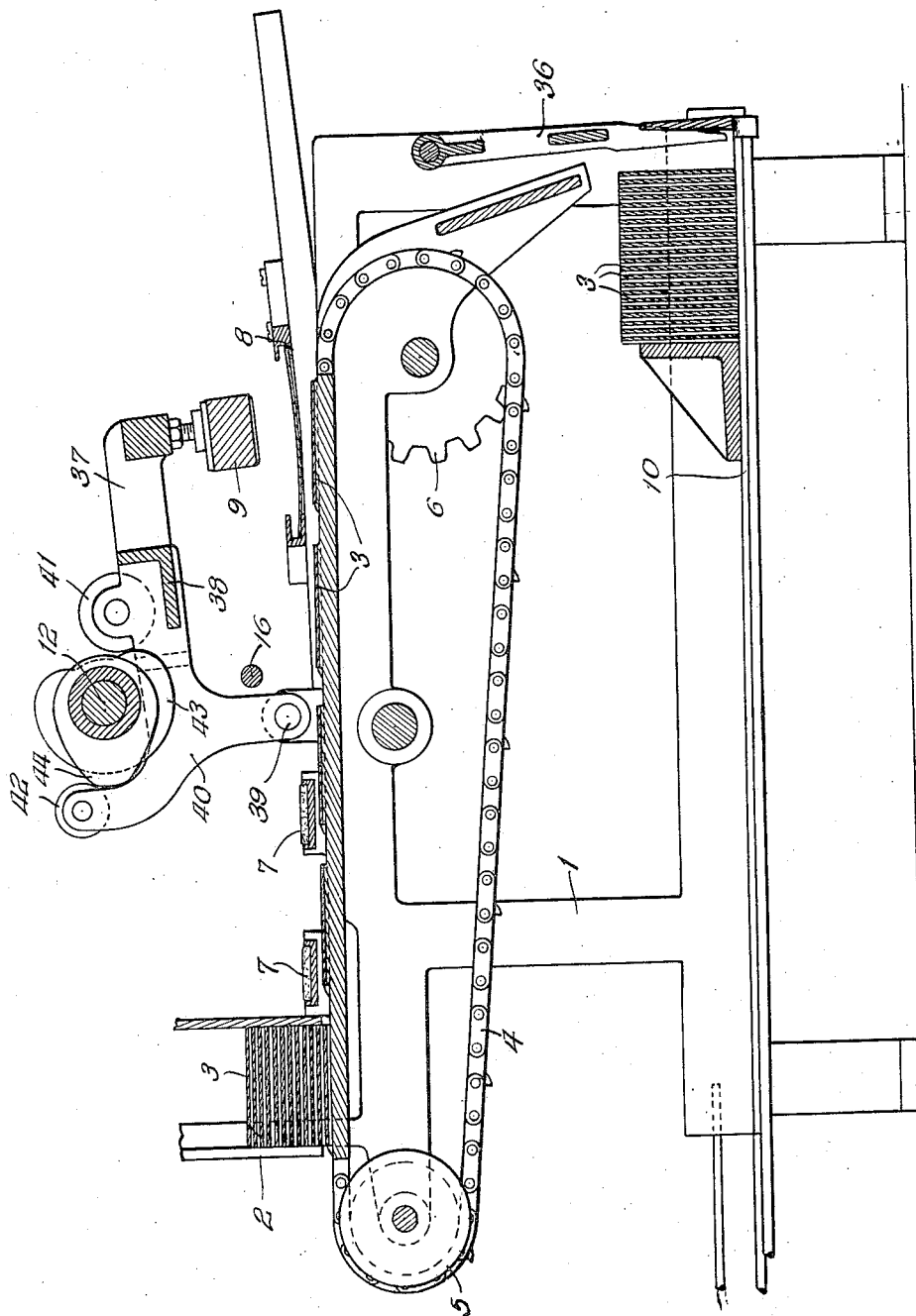
J. S. DUNCAN

PRINTING MACHINE

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Fig. 1



Inventor:
Joseph S. Duncan
By: Wm. A. Bell
Atty.

Jan. 29, 1924.

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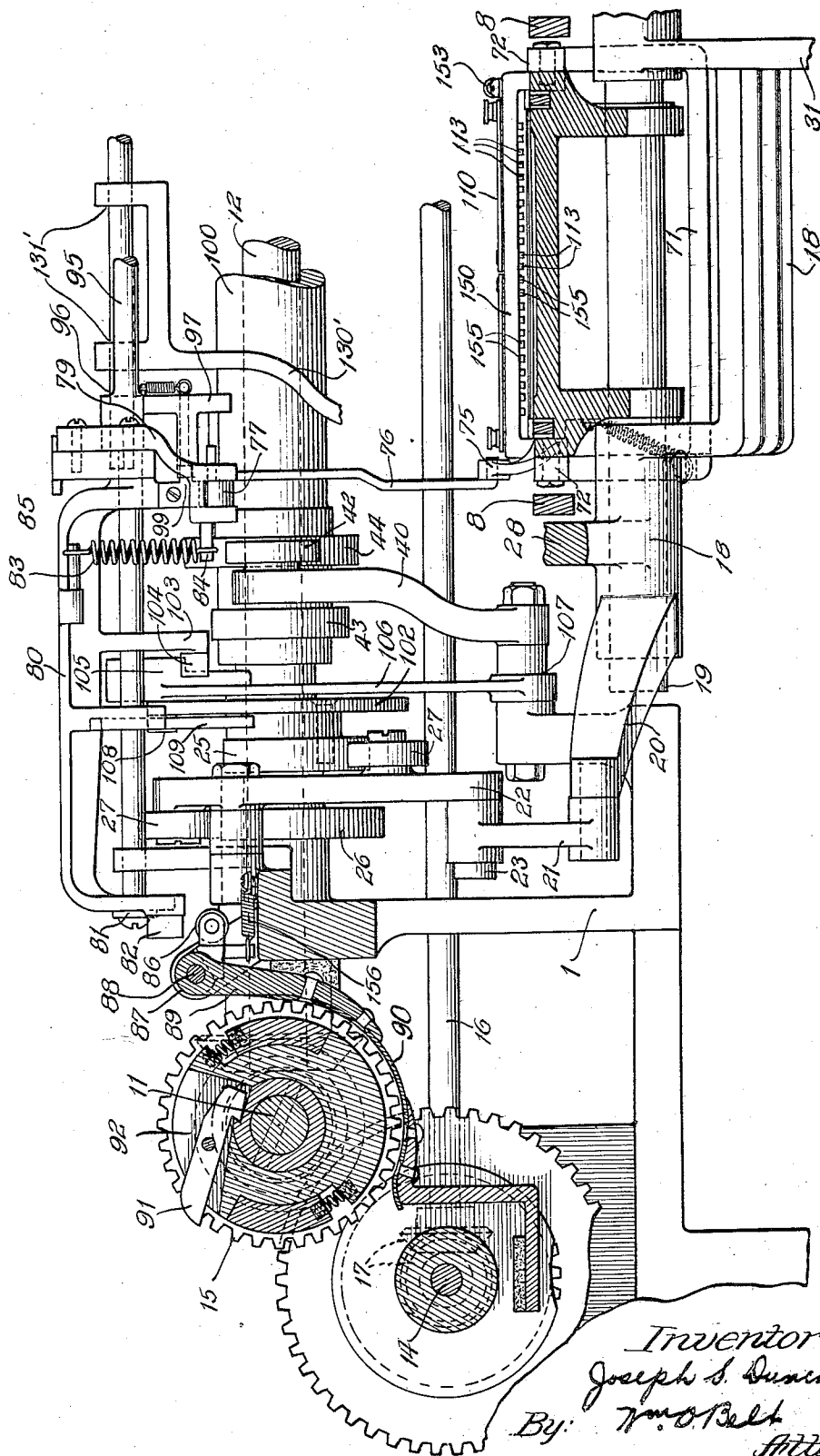
J. S. DUNCAN

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. 9 Sheets-Sheet 2

Fig. 2



Inventor:
Joseph S. Duncan
By: *Thos. O. Bell*
Atty.

Jan. 29, 1924.

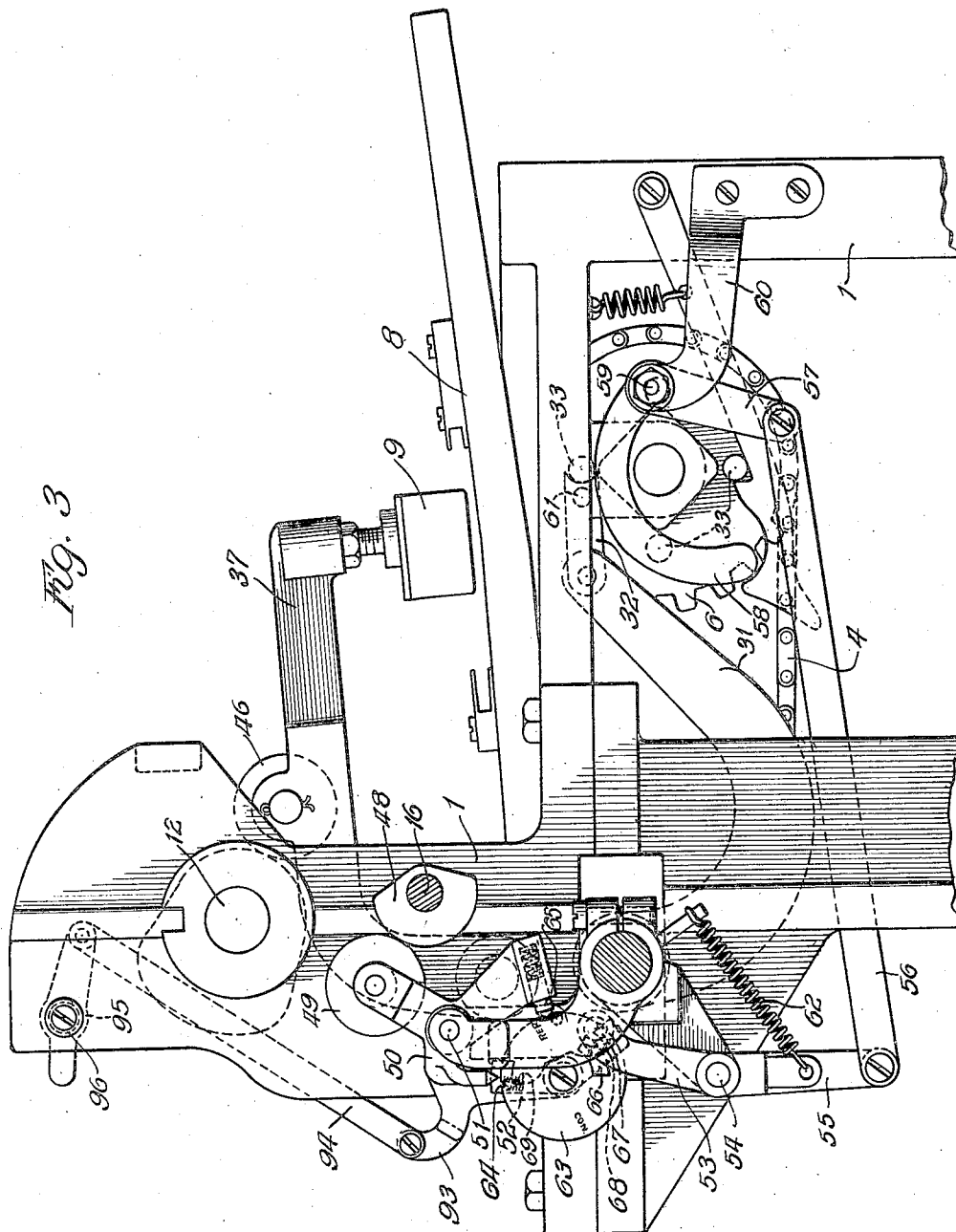
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J. S. DUNCAN

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Inventor:
Joseph S. Duncan
By: Wm. A. Bell
Atty.

Jan. 29, 1924.

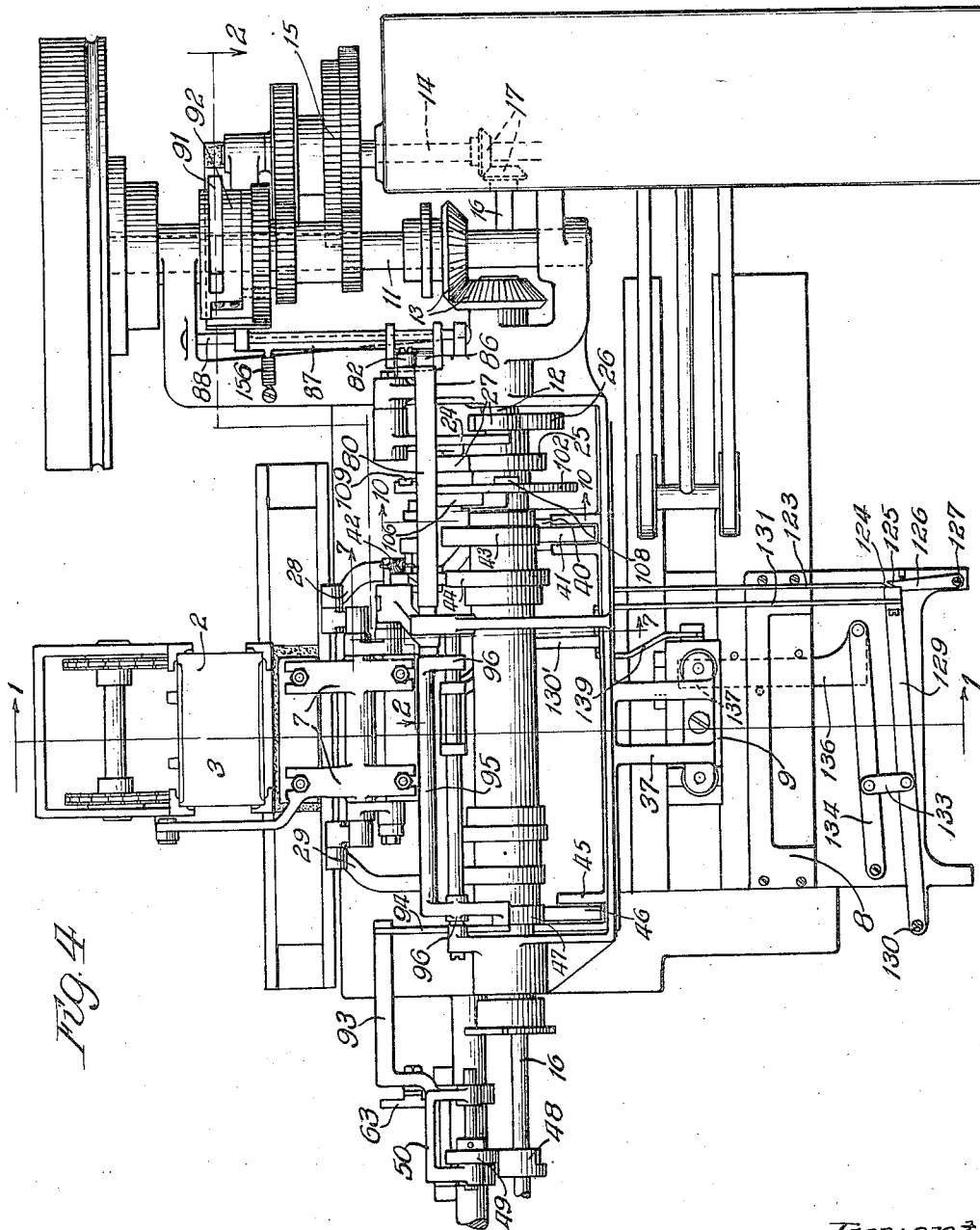
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J. S. DUNCAN

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9 Sheets-Sheet 4



Inventor:

Joseph S. Duncan

By: J. Wm. Bell

Atty.

Jan. 29, 1924.

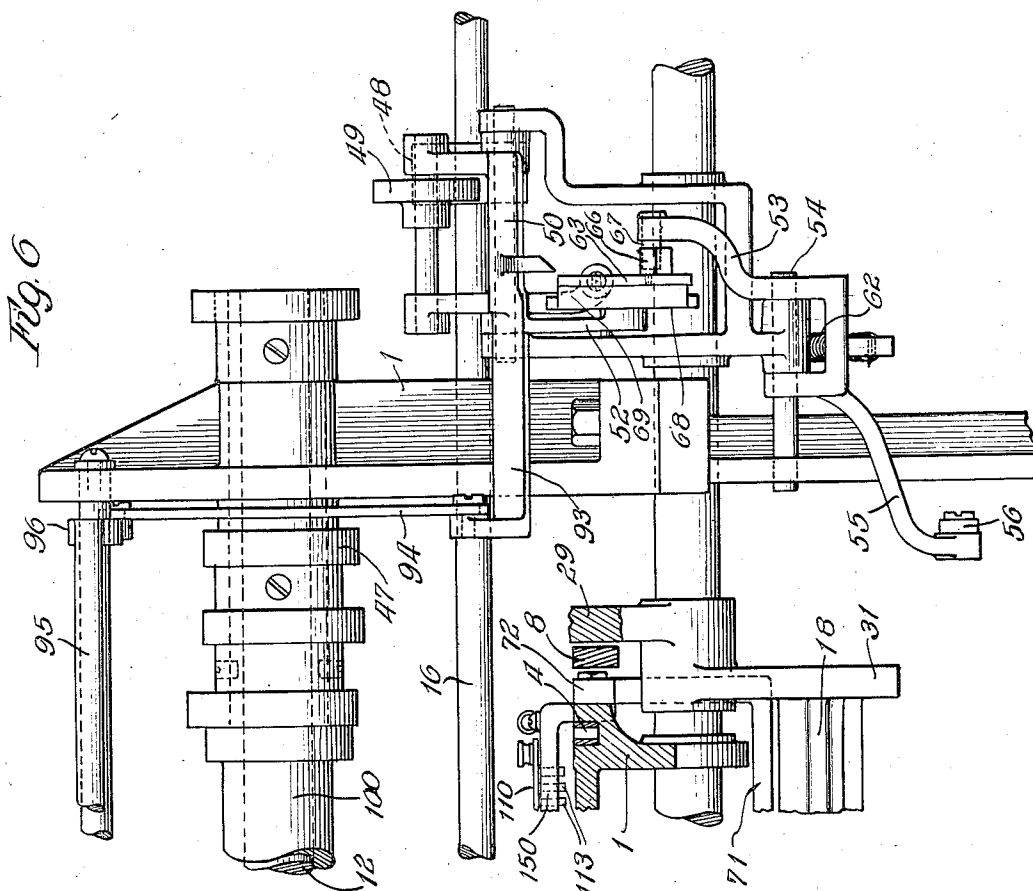
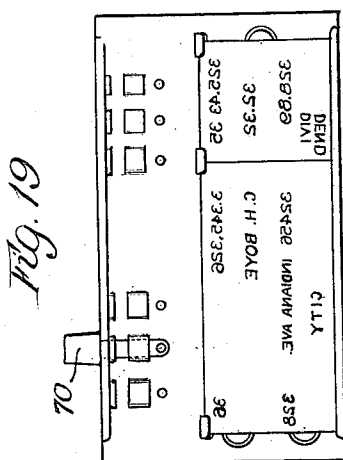
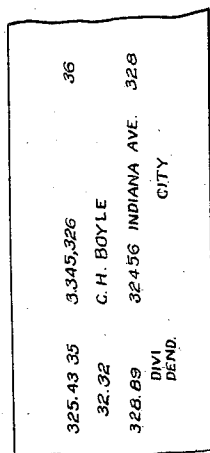
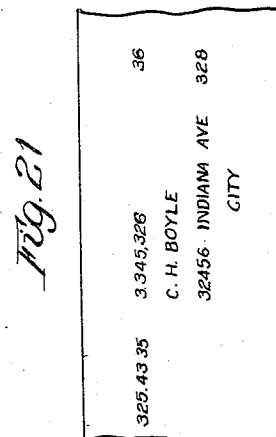
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J. S. DUNCAN

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9 Sheets-Sheet 6



Inventor:
Joseph S. Duncan
By: Wm O Bell
Atty

Jan. 29, 1924.

1,481,860

J. S. DUNCAN

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Fig. 9

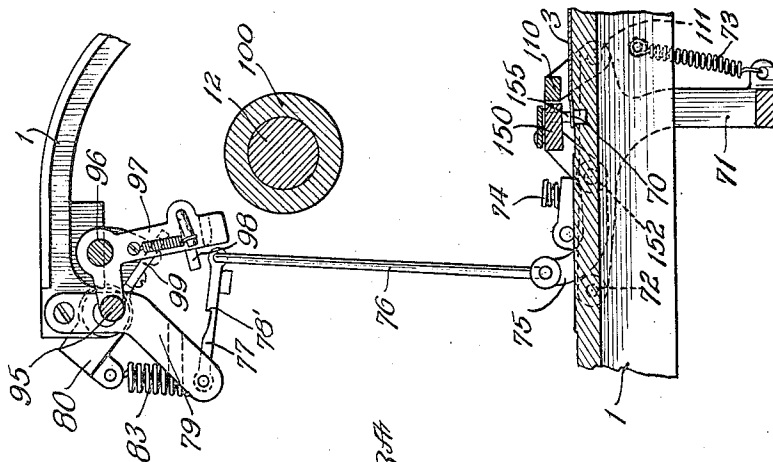


Fig. 8

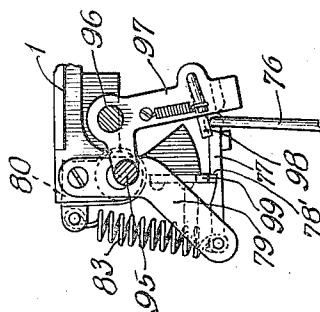


Fig. 18A

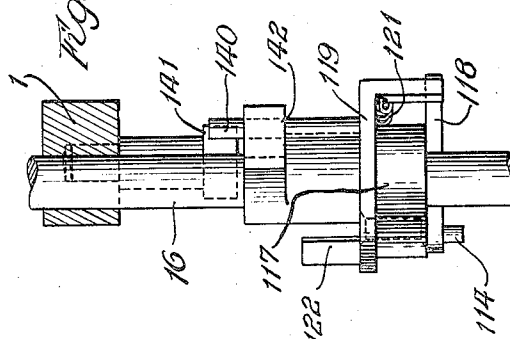
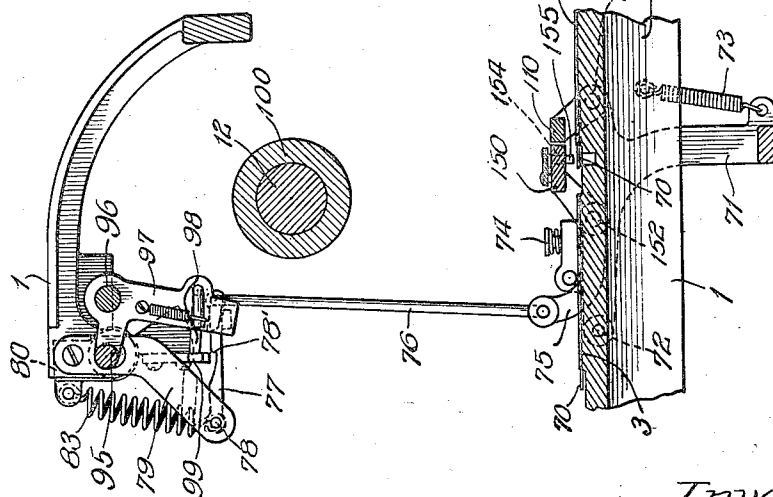


Fig. 7



Inventor:

Joseph S. Duncan
By: *Wm. O. Bell*
Atty.

Jan. 29, 1924.

1,481,860

J. S. DUNCAN

PRINTING MACHINE

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Fig. 12

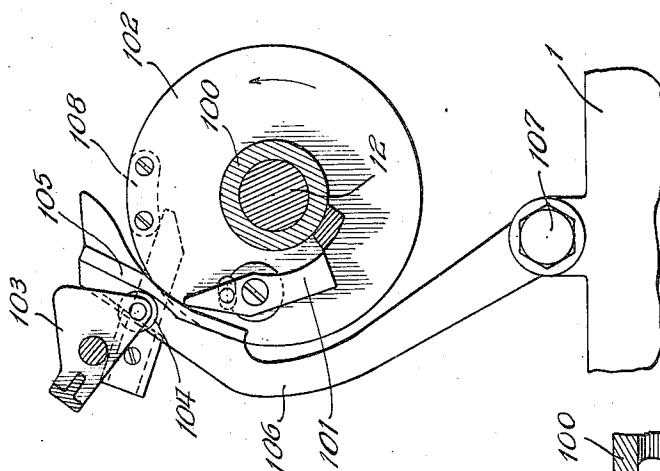


Fig. 11

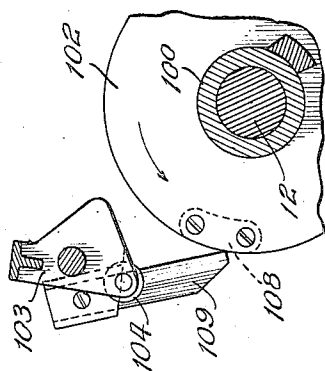


Fig. 13

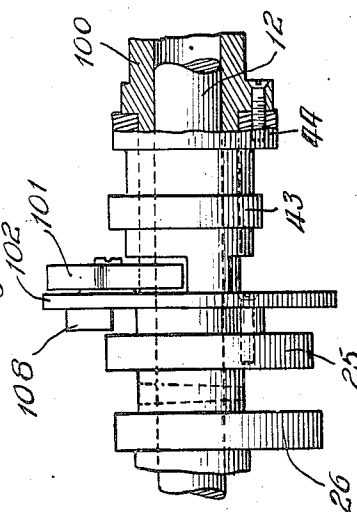
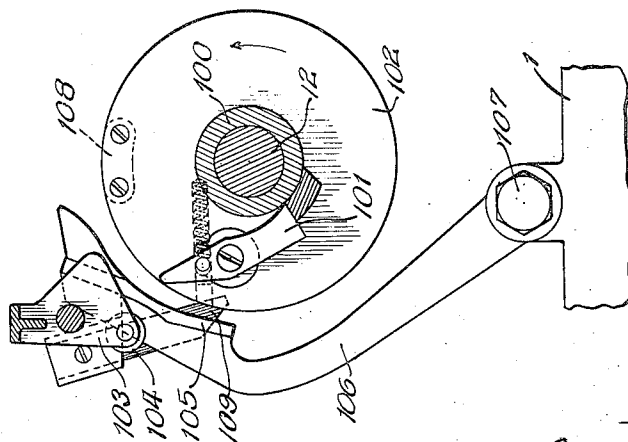


Fig. 10



Inventor:
Joseph S. Duncan
By: Wm. O. Bell
Atty.

Jan. 29, 1924.

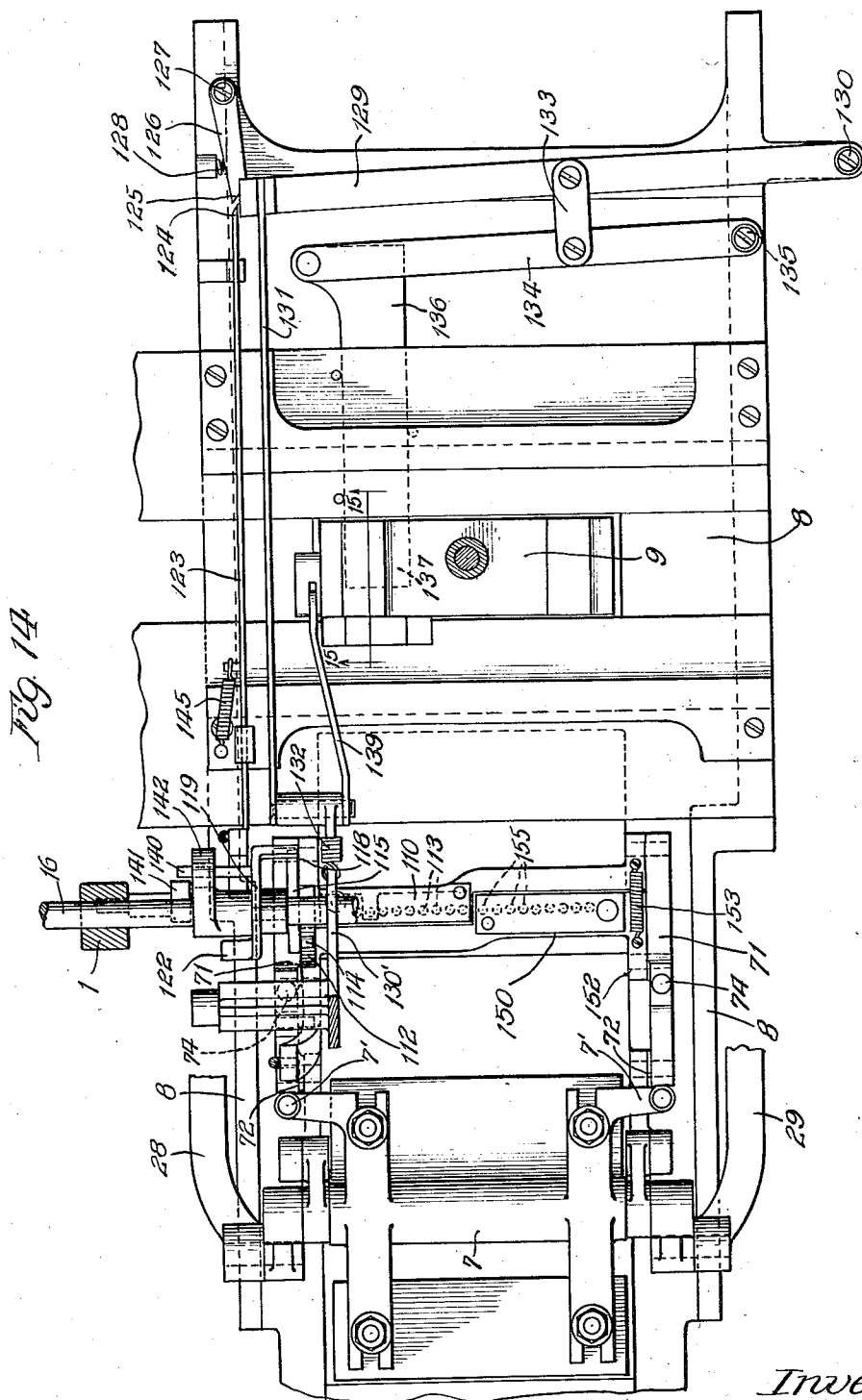
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J. S. DUNCAN

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9 Sheets-Sheet 9



Inventor:
Joseph S. Duncan
By: Wm. O. Bell
Atty.

UNITED STATES PATENT OFFICE.

JOSEPH S. DUNCAN, OF CHICAGO, ILLINOIS.

PRINTING MACHINE.

Application filed August 29, 1921. Serial No. 496,197.

To all whom it may concern:

Be it known that I, JOSEPH S. DUNCAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Printing Machines, of which the following is a specification.

This invention relates to printing machines in which a plurality of printing devices are successively fed through the machine, certain of the devices being selected according to a predetermined plan and placed in printing position where a platen takes an impression from them, all the devices being finally deposited in their original order in a suitable storage drawer.

One object of the invention is to provide means whereby a predetermined number of impressions will be taken from each of the selected printing devices and whereby the entire or only a portion of the matter of said devices will be printed automatically, according to a predetermined plan.

Another object of the invention is to provide means operating automatically to select certain of the printing devices according to a predetermined plan and take from each of the selected devices a definite plurality of impressions of the whole or a certain portion only of the matter thereon, according to an additional predetermined plan.

More specifically, my object is to produce a machine which can be adjusted to take one, two or more impressions at will from a selected printing device, and equip it with two selector bars, one to select and determine which of a series of printing devices will be printed and the other to select and determine what printing matter on each of the selected printing devices will be printed.

With these and other objects in view this will more fully appear as the description proceeds. I have illustrated in the drawings a particular embodiment which I have found to be very satisfactory in use. In the drawings:

Fig. 1 is a transverse section view of the machine taken on the line 1—1 of Fig. 4 illustrating the general lay-out of the magazine, plate feeding mechanism, the platen and the envelope plate.

Fig. 2 is a longitudinal section on the broken line 2—2 of Fig. 4.

Fig. 3 is an elevation looking at the left end of Fig. 4.

Fig. 4 is a plan view with the front of the machine at the bottom of the figure.

Fig. 5 is a transverse sectional view taken approximately on the same line as Fig. 1 but showing much detail of the inking mechanism, the selector bars and the automatic cut-out mechanism which was omitted from Fig. 1 for clearness.

Fig. 6 is a partial rear elevation of the machine particularly showing the lever mechanism shown in side elevation in Fig. 3.

Figs. 7, 8 and 9 are sectional views taken on line 7—7 of Fig. 4 and illustrating successive positions of certain parts under the control of the selector bars and stop cams.

Figs. 10, 11 and 12 are sectional views taken on line 10—10 of Fig. 4 showing successive positions of parts having to do with the stopping of the printing mechanism and the resumption of the operation thereof.

Fig. 13 is a detail plan view illustrating the cam sleeve and the pawl which constrains it to move with the cam shaft.

Fig. 14 is an enlarged plan view of the automatic cut-out mechanism.

Figs. 15 and 16 are details illustrating the arrangement of the retractable platen section.

Figs. 17 and 18 and 18^A are enlarged details of the operating mechanism for actuating the automatic cut-out.

Fig. 19 illustrates one of the printing plates.

Fig. 20 is a statement carrying an impression of all the printing matter on the plate shown in Fig. 19.

Fig. 21 is a similar statement in which a part of the printing matter carried by the plate was omitted by the operation of the automatic cut-out.

Referring to the drawing the general layout includes a frame 1 equipped with a magazine 2 for printing devices 3 which devices are fed by chains 4 passing about the sprockets 5, 6 first to inking mechanism 7 and then to a position beneath the envelope plate 8 where a platen 9 takes an impression therefrom and finally into a galley 10 carried by the frame 1 beneath the mechanism of the machine.

These operations are effected by power from any suitable source, such as an electric motor carried on the frame, applied to the main drive shaft 11 which drives the cam shaft 12 through beveled gears 13 in the ratio

of 1 to 1, and main feed shaft 14 through a selective gear transmission 15 giving, in this illustration, either 1 to 1, 2 to 1, or 3 to 1 ratios of shaft 11 to shaft 14. The main feed shaft 14 in turn, drives the stop finger cam shaft 16 through bevel gears 17 in ratio 1 to 1.

A driving rocker 18 is pivoted on the frame at 19 and has an arm 20 pivoted to a link 21, which is in turn pivoted to the bell crank lever 22 pivoted at 23 on frame 1 and having a forked arm 24 straddling the cam shaft 12 and receiving motion from the cams 25 and 26 on the cam shaft through suitable rollers 27. By this arrangement the rocker 18 makes 1 complete vibration about its pivotal axis for each revolution of the shaft 12. This rocker 18 has a pair of arms 28 and 29 for operating the inking devices 7 and an arm 31 extending forwardly underneath the machine to drive the feed sprocket 6 through a pawl 32 pivoted to said arm 31 and adapted to engage the pins 33 or other suitable means on the sprocket. There is also another arm on this rocker which through suitable link mechanism causes the envelope plate 8 to vibrate up and down about its pivot 35 and operates the packer 36, but it is deemed unnecessary to show these parts in the present application.

The impression platen 9 is carried by a stamper arm 37 of the rocker frame 38 hinged to the main frame at 39. One end of this frame carries a forked arm 40 straddling the cam shaft 12 and having thereon the rollers 41 and 42 engaging cams 43 and 44 respectively while the other end has an arm 45 equipped with a roller 46 contacting with cam 47. Cams 43 and 47 operating on rollers 41 and 46 swing the frame 38 downwardly to cause the platen to take an impression from a printing device thereunder upon a sheet resting on the envelope plate 8 while cam 44 acting roller 42 raises the platen. Any suitable means may be employed for feeding the blanks to the platen so long as it is driven by the shaft 14 or otherwise in the proper ratio to the plate feeding and printing mechanism.

Multiple impression mechanism.—With the mechanism and arrangement thus far described each revolution of the shaft 12 will cause the platen to take an impression and will cause the arm 31 and pawl 32 to operate the plate feeding mechanism to move one plate out of printing position and move another plate into printing position. In other words, this structure and arrangement would result in taking only a single impression from each printing device. In order to cause a plurality of impressions to be taken from each plate, it is only necessary to render feed of the plates inoperative for the appropriate number of revolutions of the shaft 12. I accomplish this by a mechanism

controlled by a cam 48 on shaft 16 which it will be remembered is driven in a ratio of one to one from the shaft 14 which in turn is driven by the selective gear mechanism in the selected ratio from the shaft 11. This cam 48 is arranged to act upon a roller 49 carried by the one arm of bell crank lever 50 pivoted at 51 on the main frame 1 and having an arm 52 adapted to communicate this motion to a second bell crank lever 53 pivoted at 54 on the main frame and having an arm 55 connected by a link 56 passing forwardly under the machine to a lever 57 on a cam 58 pivoted at 59 on a bracket 60 carried by the main frame 1. This cam 58 is adapted in certain positions to engage the pin 61 on the pawl 32 and prevent the pawl from coming in contact with any one of the pins on the sprocket wheel 6. I have shown a construction of cam 48 and the compounding levers which will move the link 56 to place the cam 58 in position to intercept the pawl 32 two out of each three rotations of the shaft 12 when said shaft 12 is driving shaft 14 at a ratio of 3 to 1. From this it will be seen that the impression platen 9 will descend three times on a plate in printing position after which the cam 48 will present its flattened side to the roller 49 and allow the spring 62 to move the lever 53 to lower the cam 58 out of the path of the pin 61 on the pawl 32 and permit the plate feeding mechanism to put a new plate in printing position.

It will also be obvious that if the gears of the selective transmission have been engaged so as to drive the shaft 14 in two to one ratio relative to shaft 11 that two impressions will be taken from each printing device without any other change in the structure. I have accomplished this by making the flattened portion on cam 48 of sufficient length to allow the spring 62 acting through the lever 53 and the lever 50 to move the roller 49 towards the shaft 16 a sufficient distance to permit the cam 58 taking a position that will allow the pawl 32 to engage one of the pins on the sprocket 36 after either two or three revolutions of the shaft 12 with reference to the shaft 14.

It is also desirable to have this machine capable of taking repeated impressions from a single plate and also to take one impression only from each plate as they are fed through. Or as it is known in the art, it is desirable to have the machine by slight adjustment of parts to triplicate, duplicate, repeat or print continuously. By the above prescribed arrangement triplication and duplication are taken care of and it is obvious that the same principles would make it possible with mechanical changes to take a greater number of impressions from each printing device.

In order to provide for repeating and

continuous printing I have equipped the lower arm of the lever 50 with a rotary disk 63 having recesses 64 in its periphery adapted to receive a spring pressed plunger 65 whereby it may be held in the desired position with reference to the lever 50. This disk carries on one side a lug 66 which contacts with a pin 67 on the upper arm of the lever 53 to communicate the motion of the lever 50 to the lever 53. When the disk 63 is in the position shown in Fig. 3 the lug 66 gives the right ratio between the levers to function in connection with cam 48 to make the machine triplicate or duplicate according to the selection of the gears in the transmission. The side of this disk opposite to the one on which the lug 66 is placed has a pair of hooked projections 68 and 69 which may be brought into engagement with a pin or pins and carried by the main frame 1. One of these hooks 68 when engaged with the pin will hold the disk in a position with reference to the frame that will maintain the roller 49 just out of contact with the cam 48. The effect of this is to have the lug 66 at a different point from that shown in the drawing but which will hold the lower end of the lever 53 in its rearmost position whereby the cam 58 is so placed and maintained that the pawl 32 does not at any time drive the sprocket 36, consequently the platen continues to take impressions from the same plate. When the other hook 69 is engaged with the pin the cam 48 must be slid along the shaft 16 out of the way of the roller 49 (which movement is provided for in an obvious manner) and the roller 49 is held in a position adjacent to the shaft 16 to move the lever 53 to a position in which the cam 58 is always out of the path of the pawl 32 thereby permitting the pawl 32 to engage a pin on the sprocket at each motion of the arm 31 and consequently feed a printing plate into and out of position at each revolution of the shaft 12. It will be seen by this simple arrangement that I have provided a machine in which adjustments requiring only a few seconds of time will permit the machine to be used to print continuously from consecutive plates, to print repeatedly from the same plate, and to take a definite plurality of impressions from each consecutive plate.

The selector mechanism for the printing plates.—As indicated in the statement of the invention, means are provided which cooperate with the above described means for taking impressions from printing plates and which will select from a series of plates arranged in the hopper 2, those bearing a certain mark or tab which indicates that they are to be or not to be printed in accordance with the predetermined plan. Each of the printing devices is provided with one or more tabs 70 in a manner fully set forth in my prior Patent No. 1,209,414. A selector rocker 71 having somewhat the form of a yoke is pivoted at 72 on the main frame 1 (Fig. 7) and normally held in uppermost position by a spring 73 attached at one end to the rocker and at the other to the main frame. In front of the pivot 72 each arm of the yoke carries a spring mounted contact 74 (Figs. 7 and 14) pressed downwardly by arms 77 carried by the inking device 7 with each vibration of the driving rocker 18. A V-shaped selector bar 150 has its arms pivoted to the arms of yoke 71 at 152 (Figs. 7 and 14) and is normally held in the position shown in Figs. 5, 7 and 14 by the spring 153 stretched between it and the selector bar 110. The bar 150 has a number of sockets 154 adapted to secure pins 155 to contact with tabs 70 carried by the printing plates in the manner fully set forth in my patent above mentioned. The selector bar 150 also has an arm 75 projecting rearwardly from its pivot 152 which is connected by a link 76 with a latch 77 pivoted at 78 on a bracket 79 carried by the main frame 1. This latch 77 has a notch 78' by which it engages a contact piece 99 on a rocker 80 pivoted at 81 on the main frame. One end of this rocker carries a roller 82. A spring 83 connected to the main frame at 84, and the rocker at 85 tends to hold the rocker in position, for the roller 82 to bear on the roller 86 carried by a rocker 87 (Figs. 2 and 4) pivoted on a shaft 88 parallel to the shaft 11 and having an arm 89 carrying a trip cam 90 adapted to trip the spring pawl 91 by which the gear cone 92 of the transmission gearing 15 is secured to rotate with the shaft 11. It will thus be seen that when a pin 155 on the selector bar strikes the tab 70 the arm 75 will be moved downwardly drawing the link 76 and moving the latch 77 so as to free the rocker 80 and allow the spring 83 to bring the roller 82 to bear on the roller 86 thereby moving the trip cam 90 in position to trip the pawl 91 and release the gear cone 92 from the shaft 11 thereby stopping the rotation of the shaft 14 which feeds the blanks to the printing mechanism. However, inasmuch as the selector bar cannot be very conveniently made to operate on the plate which is in printing position but functions most suitably on a plate being inked and next to be placed in printing position, it is necessary that the feed printing mechanism be not stopped until the last impression has been taken from the plate preceding the one carrying the tab 70 to be acted upon by the selector bar. To accomplish this I again make use of the cam 48 and the lever 50, providing the lever 50 with an arm 93 (Figs. 3, 4 and 6) acting through a push rod 94 to move the rocker 95 pivoted on the main frame at 96 and having an arm 97 equipped with an abutment 98 (Figs. 7, 8

and 9) adapted to contact with the contact piece 99 of the rocker 80 and prevent the rocker 80 from moving the roller 82 to effect the tripping of pawl 91 until the roller 49 descends upon the cutaway portion of the cam 48, or in other words, until the time when the feed mechanism will feed the plate just printed out of printing position and bring the plate acted upon by the selector bar into printing position. Thus it will be seen that the selector bar will be moved to release the mechanism for tripping the cam 91 with each downward movement of the rocker 71 while the selected plate is waiting to be put in printing position, but that the cam 48 acting through the link and lever mechanism prevents the rocker 80 from being moved so as to trip the pawl 91 until the proper number of impressions have been taken from the preceding plate and the selected plate is ready to be fed into printing position.

At this point in the cycle of operations it is necessary to stop the printing mechanism because no blanks are being fed and it is desired that no impressions be taken from this selected plate upon the bare platen. I accomplish this by making the cams 43, 44 and 47 which operate the printing mechanism on a sleeve 100 (Fig. 2) loosely journaled on the shaft 12 and constrained to rotate therewith by pawl 101 (Figs. 4 and 10) pivoted to a disk 102 on the shaft 12 adjacent to the cam 25. The rocker 80 is equipped with an arm 103 having a roller 104 adapted to strike against projection 105 on a curved lever 106 (Figs. 2, 10 and 12) pivoted on the main frame at 107 and aligned with the pawl 101. By this arrangement, when the rocker 80 moves to trip pawl 91 thereby stopping the feed mechanism, the lever 106 is moved to trip the pawl 101 thereby stopping the printing mechanism. In consequence the shaft 11 drives only the shaft 12 which through the driving rocker 18 operates the feed mechanism to feed the selected plate through printing position and feed the next plate into printing position. The disk 102 on the shaft 12 carries on the side opposite to the pawl 101 a projection 108 (Figs. 2, 10 and 11) which upon a continued rotation of the shaft 12 contacts with the arm 109 on the rocker 80 and restores it to normal position; the selected plate having the tab 70, being now out of the way, the spring 153 has returned the selector bar to the position in which the latch 77 engages the contact piece 99; the lever 106 drops back to normal position, the pawl 101 re-engages the sleeve 100 starting the printing mechanism into operation; spring 156 restores rocker 87 allowing pawl 91 to re-engage shaft 11 starting the feed mechanism and the stop cam shaft 16.

Thus it will be seen that I have provided means for producing a definite plurality of

impressions from the printing plate in position beneath the platen which will select according to a predetermined classification, the plates from the stack carried by the hopper that are not to be printed and when such plate is fed into printing position will intercept the operation of the printing and blank feed mechanism until the plate feed mechanism can move this selected plate out of printing position and another plate into printing position.

Automatic cut-off.—It is often very desirable to print at a particular time only a part of the printing matter on a plate while at another time it may be desired to print the entire printed matter on the plate. Figs. 20 and 21 show statements in which, in one case, three sets of figures are desired, and in the other case only one set is desired. All of these figures should be on the plate as indicated in Fig. 19 so that they may be printed when occasion requires. I prevent the printing of the figures of the undesired set at a particular time by retracting a section of the platen; and, to avoid blotting or marring the paper blank, I insert a strip of metal between that portion of the printing plate on which these figures appear and the paper. Means are, of course, provided for automatically retracting the platen section and inserting the metal strip, and for replacing the platen section and withdrawing the strip. In the device illustrated the platen section is normally retracted and the strip is normally inserted, but obviously I might make the reverse positions normal.

The printing or failure to print the particular figures or other matter is effected by inserting a tab in the proper position to be engaged by a pin in a second selector bar. This second selector bar 110 is pivoted at 111 on the yoke 71 and has rearwardly and upwardly projecting arm 112 (Fig. 5) which is rotated to elevated position when a pin 113 (Figs. 17 and 18) in the bar 110 strikes a tab on the printing plate.

In this position it is struck by a pin 114 carried by a latch 115 pivoted at 116 on the bar 117 fixed on the shaft 16. The end of the lever 115 opposite the pin 114 has an arm 118 (Fig. 14) normally holding the pawl 119 in the position indicated in Fig. 17. This pawl 119 is pivoted at 120 on the bar 117 and a spring 121 tends to move the pawl to the position shown in Fig. 18, which tendency is resisted by the latch when the aforesaid end 118 is in position to engage the pawl 119. When the pawl is in the position shown in Fig. 18 the rotation of the shaft 16 will bring the abutment 122 (Fig. 14) on the pawl into contact with the end of a push rod 123 having a bevelled end 124 adapted to engage the complementary bevelled end 125 on a pawl 126 pivoted at 127 and acted upon by spring 128 to latch

the lever 129 in the position shown in Fig. 14. Forward movement of the push rod 123 eventually results in the release of the pawl 126 leaving the lever 129 free to move forwardly about its pivot 130. A link 131 is connected at one end to the lever 129 and its other end to a rocker 130' pivoted at 131' (Fig. 5) on the main frame and urged forwardly by a spring 132. Thus when the pawl 126 has been released the spring 132 will move the rocker 130' to push the rod 131 and swing the lever 129 forwardly. This lever is connected by link 133 to a lever 134 pivoted at 135 to the envelope plate and at its opposite end pivoted to the cut-off slide 136 having a portion 137 adapted to lie between the figures on the printing plate which it is desired not to print and the platen 9. The portion of the platen 9 overlying the cut-off 137 is connected with an eccentric 138 by which it may be moved up and down to allow the cut-off 137 to be interposed above the plate or when the cut-off is withdrawn to complete the surface of the platen so that when the total impression of the printing plate is made this eccentric 138 is operated by a link 139 connected with the rocker 130' whereby when the rocker 130' moves to withdraw the cut-off from above the plate the eccentric is moved to present the adjustable section of the platen in line with the fixed section so that the completed impression plate is made. By mounting the bar 117 on the shaft 16 the operation of this cut-off is easily timed to accord with the triplicating or duplicating mechanism under control of the cam 48 which it will be remembered is secured to the shaft 16.

After the plurality of impressions have been taken the pin 140 on the pawl 119 (Fig. 14) comes in contact with the cam 141 which restores the pawl 119 to normal position controlled by the latch 115; the cam 142 carried by the shaft 16 contacts with the roller 143 carried by an arm 144 of the rocker 130' and moves it to the rear operating the eccentric 138 and the rod 131 to elevate the adjustable section of the platen and reinsert the cut-off slide; a spring 145 restores push rod 123 in position in the path of the abutment 122 on the pawl 119; and pawl 126 snaps into place locking the lever 129.

As shown the movable platen section 146 is hinged to the platen frame 9 at 147 and a spring 148 tends to hold it in retracted position, but obviously this arrangement is optional.

From the foregoing it will be clear that I have produced means to print the whole or part only of a printing plate which co-operates with the other mechanism disclosed to effect certain results, but which may be used separately when occasion arises.

I am aware that various changes in the

form and proportion and arrangement of parts of my invention may be made without departing from the spirit and without sacrificing any of the advantages thereof and I reserve the right, therefore to make all such changes as fairly fall within the scope of the following claims.

I claim:

1. In a printing machine, a plurality of printing devices, means for feeding said printing devices, a platen, means to select certain printing devices to be printed and others to be skipped, means to prevent a portion of a printing device from printing, and selector means to control said last named means.

2. In a printing machine, a plurality of printing devices, a platen adapted to take a definite plurality of impressions from each of said printing devices, mechanism for selecting certain printing devices to be printed and others to be skipped, means adapted to prevent a certain portion of each printing device from being printed, and selector mechanism for rendering the last named means operative or inoperative, according to a predetermined plan.

3. In a printing machine, a plurality of printing devices, an impression platen, adapted to take printed impressions from the printing devices, means for feeding said printing devices, selector means adapted to prevent certain printing devices from being printed; means adapted to prevent a portion of each printing device from printing, and means for rendering said last named means operative or inoperative by selector mechanism.

4. In a printing machine, a main frame, a plurality of printing devices, an impression platen, means for feeding said printing devices to said platen successively, means to cause said platen to take a definite plurality of impressions from each printing device; selector mechanism to select the printing devices to be printed, mechanism adapted to prevent said platen from taking an impression of a portion of each of selected printing device, and selector mechanism for controlling the last named mechanism.

5. In a printing machine, a main frame, a hopper thereon for printing devices, an impression platen, means to feed said printing devices to said impression platen, means to render said feeding mechanism inoperative during a definite plurality of operations of the said platen, selector mechanism for selecting the printing devices to be printed, means operated by the selector mechanism for rendering the platen inoperative when certain printing devices are fed into printing position, means under control of the plate feed mechanism to prevent the platen being rendered inoperative before a selected plate is put in printing position;

cut-out means to prevent said platen from printing a portion of certain printing devices, means operating in unison with the plate feeding mechanism for operating said cut-out, and selector means for rendering the last named means operative or inoperative.

6. In a printing machine, a plurality of printing devices, means for feeding said devices successively, a platen for making printed impressions from said printing devices, control means to cause said feeding means to permit said platen to take a definite plurality of impressions from each of selected printing devices, selector mechanism for selecting certain of said printing devices to be skipped, means operated by said selector means to render said platen inoperative while said feed mechanism is feeding a printing device to be skipped, means to prevent a portion of each of said printing devices from printing, and selector means adapted to control said last mentioned means.

7. In a printing machine, a plurality of printing devices, means for taking a plurality of impressions from each of said printing devices, selector means adapted to prevent certain of said printing devices from being printed, means to prevent a portion of each printing device from being printed, and means to render the said last named means inoperative, including selector mechanism.

8. In a printing machine, a plurality of printing devices, means adapted to take impressions from said printing devices, and selector means adapted to prevent certain of said printing devices from being printed and to prevent a certain portion of each of said printing devices from being printed according to a predetermined plan.

9. In a printing machine, a main frame, a supply of printing devices, means to feed said printing devices into printing position, printing mechanism adapted to print from said printing devices, selector mechanism adapted to prevent certain of said printing devices from being printed, and other selector mechanism adapted to prevent the printing of a portion of each of the printing devices selected by the first selector mechanism.

10. In a printing machine, a plurality of printing devices adapted to be successively fed through the machine, printing mechanism adapted to print the whole or part only of each of certain of said printing devices, and selector mechanism adapted to select the printing devices to be printed and the printing devices to be printed in part only.

11. In a printing machine, a series of printing devices, feed mechanism for said

printing devices, printing mechanism adapted to take a plurality of impressions from the whole or part only of each of certain printing devices of the series, selector mechanism for determining which printing device will be printed and which will be printed in the whole and which will be printed in part only.

12. In a printing machine, a plurality of printing devices, means for feeding said devices successively one at a time, a platen for making printed impressions from said printing devices, control means to cause said feeding means to permit said platen to take a definite plurality of impressions from each of selected printing devices, selector mechanism for selecting certain of said printing devices to be skipped, means operated by said selector means to render said platen inoperative while said feed mechanism is feeding a printing device to be skipped, means to prevent a portion of each of said printing devices from printing, selector adapted to control said last named means, and means to render inoperative said means to prevent a portion of each printing device from printing when said platen is rendered inoperative.

13. In a printing machine, a plurality of printing devices, means for feeding said printing devices one at a time consecutively, a platen, a drive shaft, means on the drive shaft for operating said feeding means, means engaged with said drive shaft for operating said platen, selector means adapted to select certain of said printing devices to be skipped, control means adapted to cause said feeding means to present each printing device to the platen for a definite plurality of impressions, means operated by the selector for rendering the platen inoperative while the feeding means is feeding a plate to be skipped, means for preventing a portion of each plate from being printed, and selector mechanism for controlling the last named means.

14. In a printing machine, a plurality of printing devices, means for feeding said printing devices, one at a time consecutively, a platen, a main drive shaft, a cam shaft driven by said main drive shaft, means driven by said cam shaft for operating said feeding means, means engaged with said cam shaft for operating said platen, control means for causing said feed means to retain each printing device in position for the platen to print a plurality of impressions therefrom, selector means adapted to select certain of said printing devices to be skipped, means operated by the said selector means for disengaging the platen driving means from said cam shaft while a printing device to be skipped is being fed, said platen having a movable portion

adapted to prevent a portion of each printing device from printing, means adapted to be interposed between the printing device and said movable portion of said platen, means to control said movable portion of the platen and said interposed means, and selector mechanism for controlling the last named means.

15. In a printing machine, a plurality of printing plates, means for feeding said plates successively, a platen, means for operating said platen to make printed impressions from said plates, means to control said plate for feeding mechanism to retain each plate in position for the platen to take a plurality of impressions therefrom, selector mechanism adapted to select certain plates to be skipped, means operated by said selector mechanism to render said platen inoperative while the plate feeding mechanism is feeding a plate to be skipped, means to prevent a portion of each plate from being printed, and a selector bar adapted to select the plates to be printed in whole and the plates to be printed in part only.

16. In a printing machine, a main power shaft, a cam shaft driven by said main power shaft, a blank feed shaft driven by said main power shaft, a stop cam shaft driven by said blank feed shaft, a series of printing plates, means driven by said cam shaft for feeding said printing plates, means operated by said stop cam shaft for rendering said plate feeding mechanism intermittently inoperative, means engaged with said cam shaft for operating said platen, selector means adapted to select certain plates to be skipped, means operated by said selector means for disengaging said platen driving means when said plate feeding means is feeding a plate to be skipped, means to prevent a portion of each of said plates from printing, means carried by said stop cam shaft adapted to control said last named means, and selector means adapted to initiate the action of the means carried by said stop cam shaft.

17. In a printing machine, a main drive shaft, a driven cam shaft, a driven blank feed shaft, stop cam shaft driven from said blank cam shaft, a plurality of printing plates, means driven by said cam shaft to feed said plates successively to printing position, a platen, means engaged with said cam shaft for driving said platen, cut-off means to prevent a portion of each of said printing plates from printing, means carried by said cam shaft for operating said cut-off means, a selector bar for operating said last named means, a second selector bar adapted to select plates to be skipped, and means operated by said second selector bar for disengaging the platen driving means from the

cam shaft and stopping the blank feed shaft and the stop cam shaft.

18. In a printing machine, a series of printing devices, a sectional platen adapted to take impressions of said printing devices, means for feeding said printing devices into operative position relative to the platen, and selective means operatively connected to said feeding means and said platen for displacing a section of the platen to prevent the platen from taking an impression from a portion of one of said printing devices.

19. In a printing machine, a series of printing devices, a sectional platen adapted to take impressions of said printing devices, means for feeding said printing devices into operative position relative to the platen, means for displacing a section of the platen to prevent the platen from taking an impression from a portion of one of said printing devices, and means controlled by said printing devices for controlling the last mentioned means.

20. In a printing machine, a printing form, a movable platen having a relatively movable section, means for bringing the platen into and out of operative engagement with the printing form, and means for moving said relatively movable section into an out of operative position relative to the platen.

21. In a printing machine, a printing form, a platen adapted to take impressions from said form having a movable section adapted to be retracted to prevent a portion of said form from printing, and means to move said movable section into and out of operative position, including selector mechanism.

22. In a printing machine, a printing form, a platen adapted to take impressions from said form having a movable section adapted to be retracted to prevent a portion of said form from printing, and means to move said movable section into and out of operative position, including selector mechanism operated by said printing form.

23. In a printing machine, a printing form, a platen adapted to take impressions from said form, and selector mechanism to prevent a portion of said form from being printed including means adapted to be interposed between said platen and said printing form.

24. In a printing machine, a printing form, a platen adapted to take impressions from said form having a movable section adapted to be retracted to prevent a portion of said form from printing, and means to cover the portion of the printing form not to be printed.

25. In a printing machine, a printing form, a platen adapted to take impressions from said form having a movable section

adapted to be retracted to prevent a portion of said form from printing, means to move said movable section into and out of operative position, and means to cover the portion of the printing form not to be printed.

26. In a printing machine, a printing form, a platen adapted to take impressions from said form having a movable section adapted to be retracted to prevent a portion of said form from printing, means to move said movable section into and out of operative position, including selector mechanism, and means to cover the portion of the printing form not to be printed.

27. In a printing machine, a printing form, a platen adapted to take impressions from said form having a movable section adapted to be retracted to prevent a portion of said form from printing, means to move said movable section into and out of operative position, and means to cover the portion of the printing form not to be printed.

28. In a printing machine, a series of printing devices, a platen adapted to take printed impressions from said printing devices, means for feeding said printing devices successively into position to be acted upon by said platen, means to prevent a portion of each of said printing devices from being printed by the platen, and means to render said last named means inoperative.

29. In a printing machine, a series of printing devices, a platen adapted to take printed impressions from said printing devices, means for feeding said printing devices successively into position to be acted upon by said platen, means to prevent a portion of each of said printing devices from being printed by the platen, and means to render said last named means inoperative, including selector mechanism.

30. In a printing machine, a printing form, a platen adapted to take impressions from said printing form, said platen having an adjustable section adapted in one position to prevent a portion of said form from printing, means to control the position of said movable section of the platen, and selector means for governing last named means.

31. In a printing machine, a printing plate, a platen having a movable section adapted to take an impression of the whole or part only of said printing plate, depending upon the position of said movable section, means to control said movable section, selector mechanism adapted to control said last named means, and means adapted to be interposed between said movable section of the platen and said plate.

32. In a printing device, a printing plate, a platen having a fixed section and a movable section whereby the entire plate or only a portion thereof may be printed, means for

moving said movable section of the platen into or out of operative position, a plate adapted to be interposed between said movable section and said printing plate, and selector means for controlling the position of said platen and said interposed plate.

33. In a printing machine, a printing plate, a platen adapted to make impressions from said printing plate, said platen having a section movable into printing position to cause the entire plate to be printed and into inoperative position to prevent a portion of said platen from being printed, means to move said movable section of said platen from one position to another, a slide adapted to be interposed between said movable section of said platen and said printing plate, means to operate said slide and said movable platen section in unison, and selector mechanism to control the last named means.

34. In a printing machine, a drive shaft, a cam shaft driven therefrom, a stop cam shaft driven from the drive shaft, a printing plate, a platen driven by said cam shaft and having a movable section adapted to prevent a portion of said plate from printing or to allow the entire plate to be printed, a slide adapted to be interposed between said printing plate and said platen, means to move said slide and said movable section of the platen in unison, means on said cam shaft adapted to operate the last named means, and selector mechanism to initiate the movement of the means on said cam shaft.

35. In a printing machine, a platen having a fixed section and a movable section, a slide adapted to be reciprocated with respect to said platen, means to operate said slide and said movable section of said platen, and selector mechanism for controlling the last named means.

36. In a printing machine, a printing plate, a platen adapted to print an impression of the whole or part only of said plate, a slide adapted to be interposed between said plate, and a portion of said platen, and means to operate said slide, and selector mechanism for controlling the last named means.

37. In a printing machine, a printing plate, a platen, said platen having a movable section, means for moving said movable section into and out of operative position, a selector bar, and means operated by said selector bar for controlling the position of said movable section of the platen.

38. In a printing machine, a printing plate, a platen having a movable section, a slide adapted to be interposed between said movable section and said printing plate, means for operating said movable section and said slide in unison, including a shaft, selector mechanism, and means carried by

said shaft and operated by said selector mechanism for controlling the position of said movable platen section and said slide.

39. In a printing machine, a main frame, a supply of printing devices, a platen adapted to take impressions from said printing devices, a power shaft, a cam shaft driven by the power shaft, means operated by the cam shaft for feeding said printing devices to said platen, a blank feed shaft driven from said power shaft, a stop cam shaft driven from said blank feed shaft, and means carried by said stop cam shaft to control said feed mechanism.

40. In a printing machine, a series of printing devices, a platen, selective means for setting the machine to have the platen take a definite number of impressions from each of said printing devices, means for feeding said printing devices, and selector mechanism adapted to select certain of said printing devices to be printed, and certain to be skipped.

41. In a printing machine, a series of printing devices, a platen adapted to take impressions from said devices, means for feeding said printing devices to said platen, selective means to cause said platen to take a definite number of impressions from certain of said printing devices and selector means adapted to select these certain printing devices.

42. In a printing machine, a series of printing devices, a platen adapted to take impressions from said devices, means for feeding said printing devices to said platen, means for feeding blanks to said platen to be printed, selective means to cause said platen to take a definite number of impressions from each of selected printing devices and to take no impressions from the remaining printing devices, means to render said blank feeding mechanism and said platen inoperative when a printing device not to be printed is fed to the platen, and selector mechanism for controlling the last named means.

43. In a printing machine, a plurality of printing plates, means to feed said plates consecutively, a platen, a continuously driven shaft having means engaged therewith for driving said platen and means for operating said plate feeding means, a second shaft, selective means for driving said second shaft at a plurality of different speeds relative to said first shaft, and means operated by second shaft for intermittently suspending the action of said plate feeding mechanism.

44. In a printing machine, a plurality of printing plates, a platen, a continuously driven shaft, means driven by said shaft for feeding said printing plates, means driven by said shaft for operating said platen, a

second shaft, means for driving said second shaft at a plurality of different speeds relative to the first shaft, and means carried by said second shaft for controlling the plate feed mechanism.

45. In a printing machine, a plurality of printing plates, a platen, a main drive shaft, a cam shaft driven by said main drive shaft, means driven by said cam shaft for feeding said plates successively, means driven by said cam shaft for operating said platen, a continuously driven second shaft, means associated with said main drive shaft for driving the second shaft at a plurality of different speeds relative to the cam shaft, and means on said second shaft adapted to render said plate feeding means intermittently inoperative.

46. In a printing machine, a plurality of printing plates, a platen, a main drive shaft, a cam shaft for driving said platen, means driven by said cam shaft for feeding said plates to said platen, a second shaft, selector means associated with the drive shaft for driving the second shaft at a plurality of different speeds relative to the speed of the cam shaft, a cam on said second shaft, and means operated by said cam for intermittently stopping said plate feeding mechanism.

47. In a printing machine, a plurality of printing plates, a platen, means for driving said platen, means for feeding said plates to said platen successively, one by one, a continuously driven shaft, a cam on said shaft, and means operated by said cam for controlling said plate feeding mechanism.

48. In a printing machine, a plurality of printing plates, a platen, means for driving said platen, means for feeding said plates to said platen successively, one by one, a continuously driven shaft, a cam on said shaft, means operated by said cam for controlling said plate feeding mechanism, and means to adjust said last named means to control the number of impressions to be taken from each printing plate.

49. In a printing machine, a platen, a shaft, means carried by said shaft for operating said platen, a plurality of printing plates, means operated by said shaft for feeding said printing plates to said platen, one at a time, a continuously driven second shaft, means interposed between said second shaft and said plate feeding mechanism for intermittently rendering said plate feeding mechanism inoperative.

50. In a printing machine, a printing form, a pivotally mounted platen having a relatively movable section, means for angularly displacing the platen with respect to its pivotal axis to cause it to take an impression from the form, and means for moving the movable section out of operative

position relative to the remainder of the platen to prevent the platen from taking an impression of a portion of the form.

5 51. In a printing machine, a printing form, a sectional platen mounted to have its sections adapted to move conjointly about a pivotal axis, one section being pivotally mounted upon the other section, means for

causing said sections to move conjointly about the common axis to take an impression from the printing form, and means for angularly displacing the one section with respect to said other section to prevent the platen from taking an impression of a portion of the form. 10

JOSEPH S. DUNCAN.