

Sept. 6, 1960

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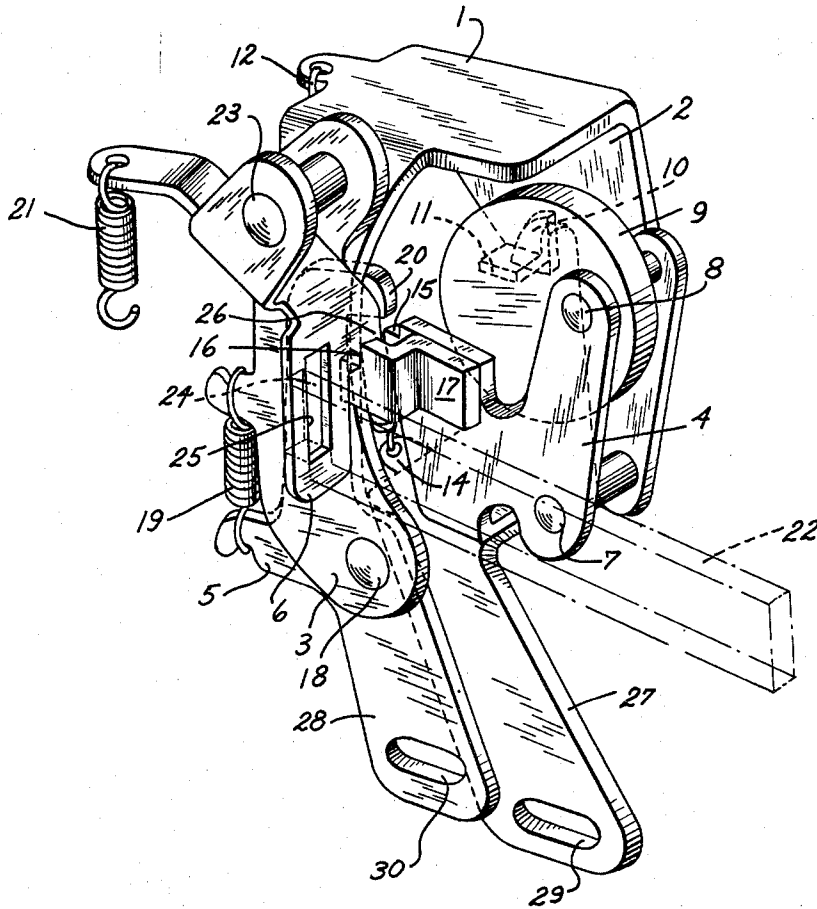
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REPEAT ACTUATION MECHANISM FOR BUSINESS MACHINES

Filed June 3, 1959

6 Sheets-Sheet 1

FIG. 1



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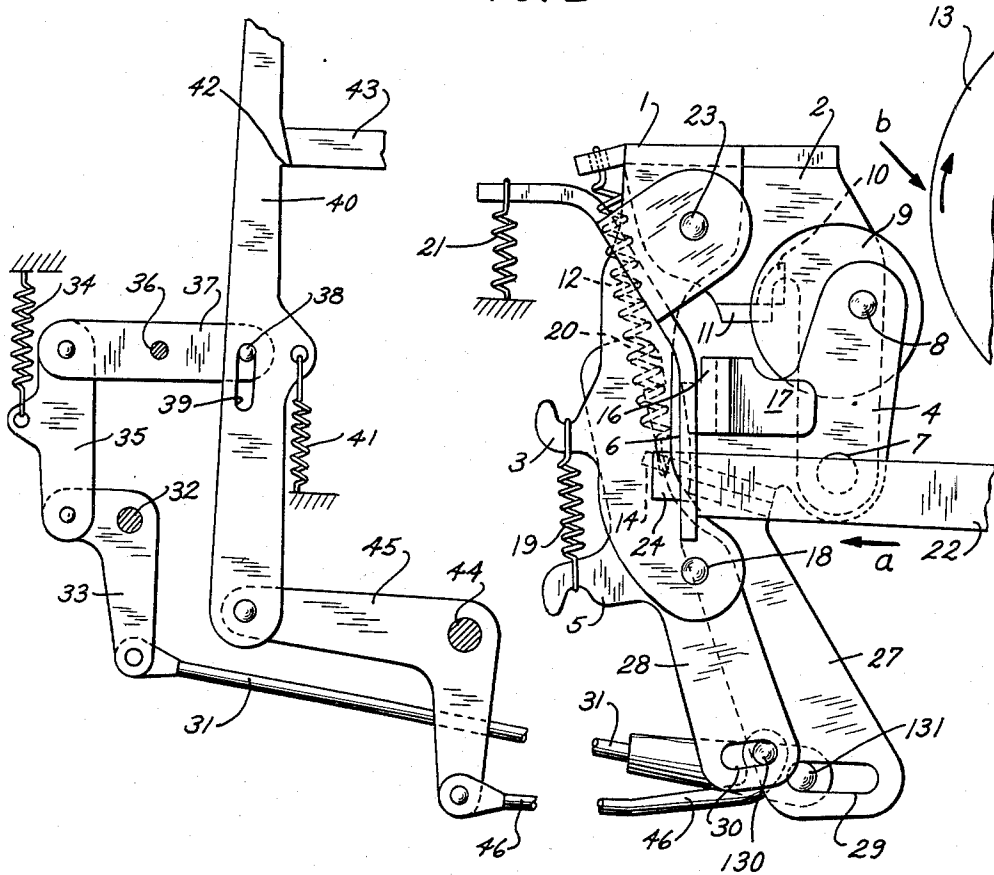
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REPEAT ACTUATION MECHANISM FOR BUSINESS MACHINES

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6 Sheets-Sheet 2

FIG. 2



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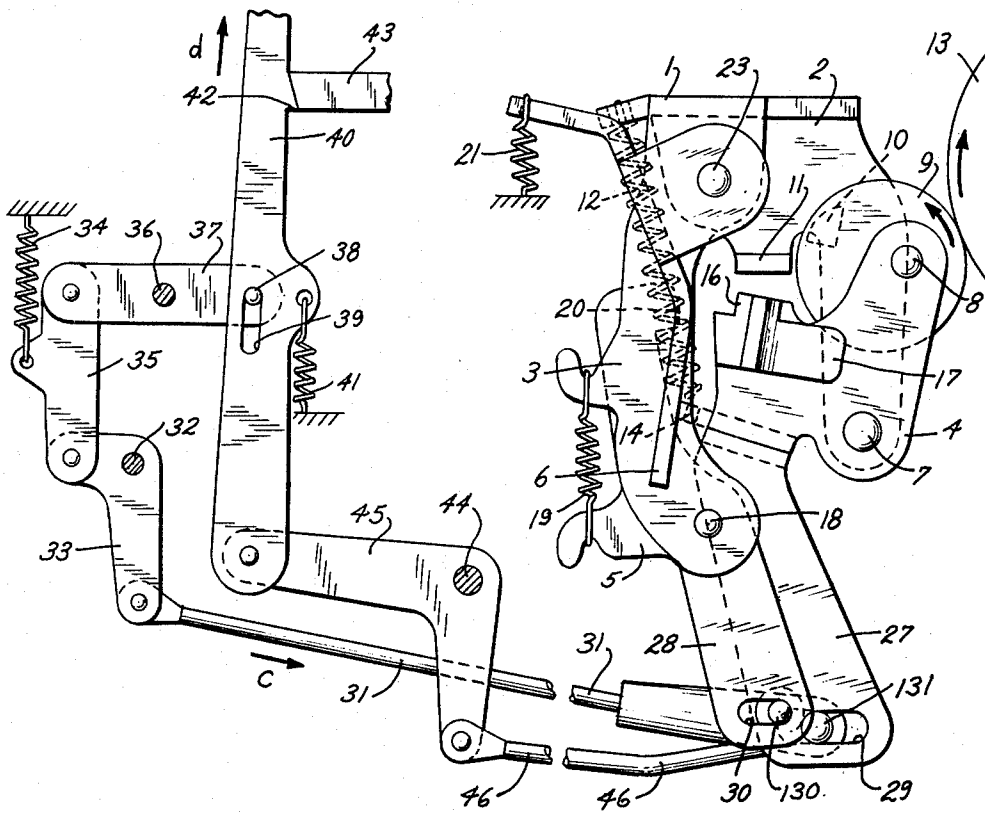
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REPEAT ACTUATION MECHANISM FOR BUSINESS MACHINES

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6 Sheets-Sheet 3

FIG. 3



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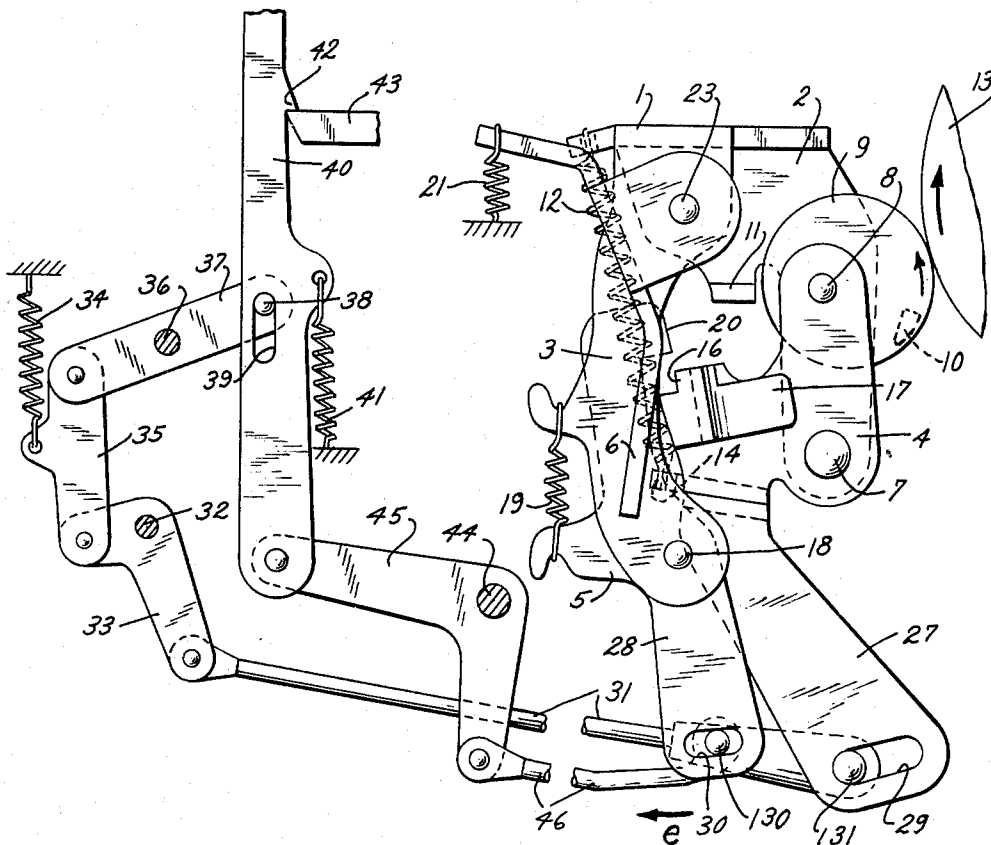
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REPEAT ACTUATION MECHANISM FOR BUSINESS MACHINES

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6 Sheets-Sheet 4

FIG. 4



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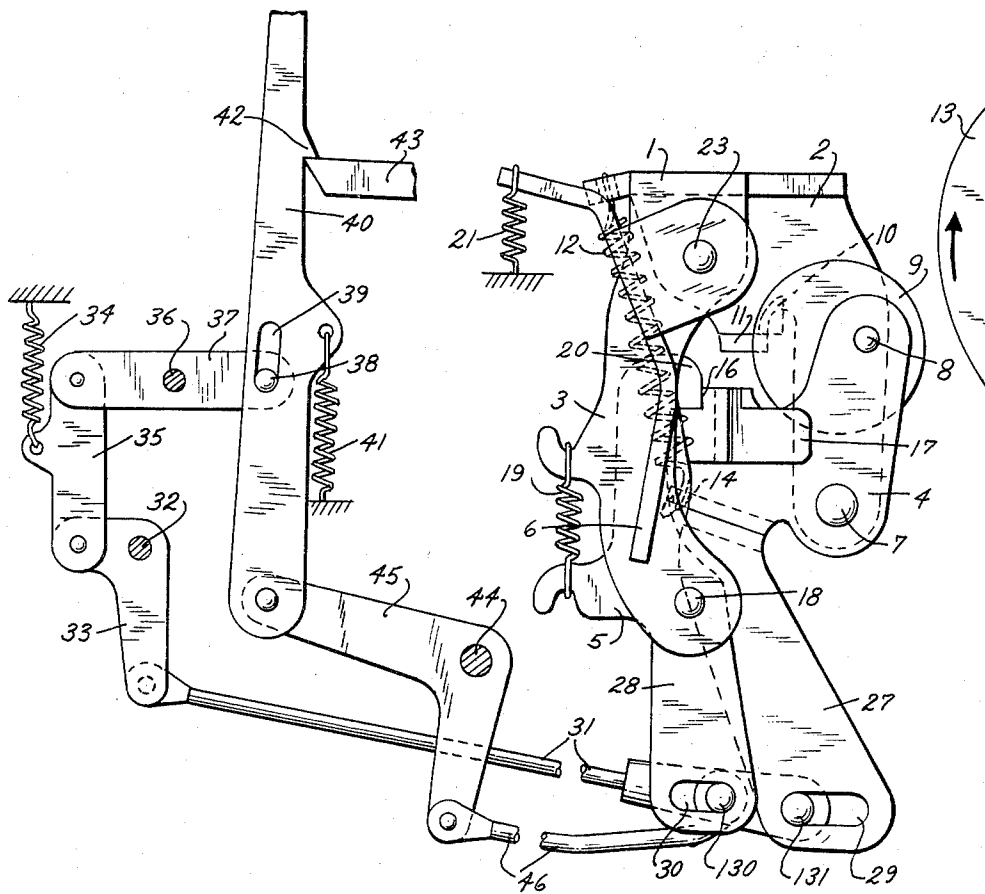
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REPEAT ACTUATION MECHANISM FOR BUSINESS MACHINES

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6 Sheets-Sheet 5

FIG. 5



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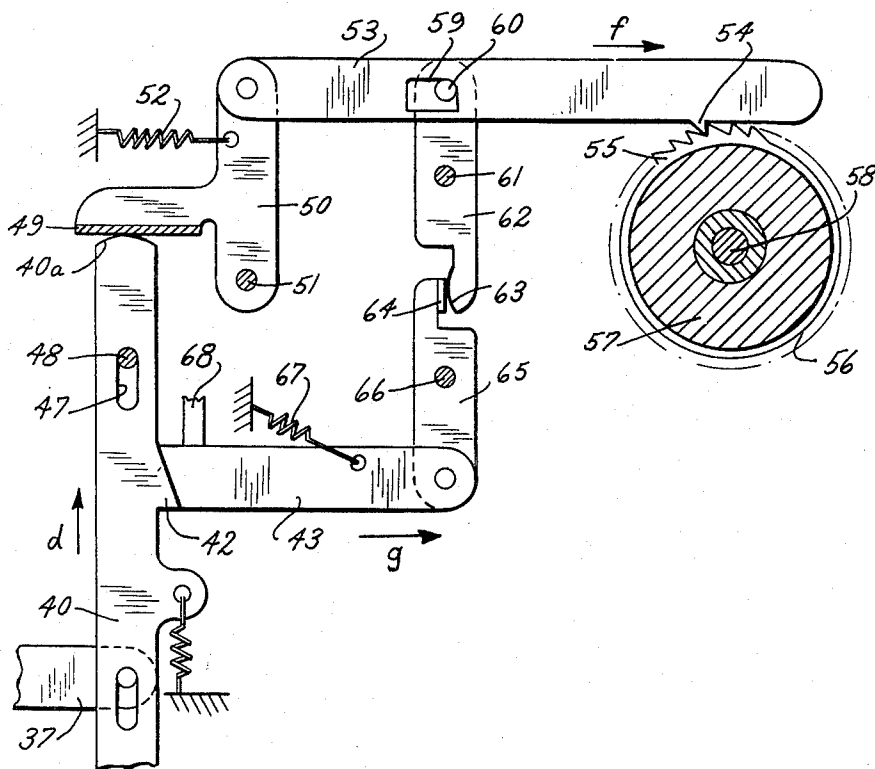
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REPEAT ACTUATION MECHANISM FOR BUSINESS MACHINES

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6 Sheets-Sheet 6

FIG. 6



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REPEAT ACTUATION MECHANISM FOR BUSINESS MACHINES

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20 Claims. (Cl. 197-17)

The present invention relates to a mechanism for selectively effecting single actuation and repeated actuation of a machine element, and more particularly to a mechanism for effecting in an electric business machine, such as an electric typewriter, repeated line shifting, spacing, back-spacing, and similar repeated operations as long as the respective key is held depressed, whereas only a single operation is performed if the key is immediately released.

Devices of this type are known. However, the apparatus of the prior art have the disadvantage that different devices are used for line shifting, spacing and back-spacing, and furthermore that frequently an operation is not yet completed, when the automatic actuation for the next following operation is initiated.

It is one object of the present invention to overcome the disadvantages of the prior art, and to provide a simple, reliably operating mechanism for selectively effecting single actuation and repeat actuation in a business machine.

Another object of the present invention is to provide an actuation mechanism of compact construction permitting an alignment of several devices of this type along the drive roll of an electric typewriter within a comparatively small space.

Another object of the present invention is to provide an actuation mechanism permitting start of any repeat operation only after completion of the preceding operation.

Another object of the present invention is to provide a mechanism for selectively effecting single actuation and repeated actuation of different machine elements of a business machine, so that the same mechanism can be used for line shifting, spacing, back-spacing, and other operations.

With these objects in view, the present invention mainly consists in a mechanism for selectively effecting single actuation and repeated actuation of a machine element such as a line shifting device, a spacing device, or a back-spacing device of an electric typewriter provided with a rotary drive roll, the mechanism comprising a support; control means, preferably including a control member mounted on the support and an eccentric disc turnably mounted on the control member and engaging the drive roll in a control position of the control member so that the control member is reciprocated; operator influenced means, for example a line-shifting key, the space bar, or the back-spacing key, for effecting movement of the control member to the position in which the eccentric disc engages the drive roll; holding means mounted on the support movable to a holding position for holding the control member in a normal position; and actuating means movable to and from an actuating position for effecting a single actuation of the machine element.

The actuating means are operatively connected to the control means, and more particularly to the control member, by a linkage so as to be moved by the control mem-

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ber to the actuating position when the eccentric disc turns and moves the control member. The actuating means are also connected by a suitable linkage to the holding means for moving the same to and from the holding position when moving to and from the actuating position.

In this manner, the control member moves again to the control position after the first actuation of the machine element so that the eccentric disc is again engaged by the drive roll and shifts the control member to effect another actuation of the machine element, and such actuations are repeated as long as the operator influenced means is held in actuated position. However, when the operator influenced means is released, the control member can return to its normal position after a single actuation of the machine element, and in this manner the initial condition of the mechanism is again established. In the preferred embodiment of the present invention, a locking means is provided which tends to lock the control member in its normal position. The operator influenced means acts on the locking means to move the same to a position releasing the control member so that the same moves to the position in which the eccentric disc engages the drive roll.

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 perspective view illustrating a part of the actuation mechanism of the present invention with other parts omitted for the sake of clarity;

Fig. 2 is a fragmentary side elevation of the mechanism of the present invention illustrating the normal position of rest of the mechanism;

Fig. 3 is a fragmentary side elevation of the mechanism illustrating the operational position of the device directly after actuation of the operator influenced means;

Fig. 4 is a side elevation illustrating another operational position of the mechanism;

Fig. 5 is a side elevation of the mechanism illustrating a further operational position of the device; and

Fig. 6 is a side elevation of a line-shifting device operated by the actuation mechanism of the present invention.

Referring now to the drawings, and more particularly to Figs. 1 and 2, a support 1 is fixedly mounted on the frame of the business machine, not shown, opposite the conventional drive roll 13 which is continuously rotated in the direction of the arrows. The support is U-shaped, and has two parallel legs 2 and 3. A control means is provided which includes a control member 4, and arm 27 fixedly secured to control member 4, and an eccentric disc 9 which is mounted for turning movement on a pin 8 extending between two parallel plates which are part of control member 4. The plates are further connected by a pin 7 which is turnably mounted on the leg 2 of support 1 so that the entire control means may turn about the axis of pin 7. The position of Fig. 1 corresponds to the position of Fig. 2, and if the control means turns in clockwise direction with pin 7, the eccentric disc 9 will move from the position of Fig. 2 to the position of Fig. 3 engaging the peripheral surface of the drive roll 13. The control means will tend to perform such turning movement under the action of a spring 12 which is secured to a projection on the yoke of support 2 and to a projection 14 on the control member 4. Spring 12 is only partly shown in Fig. 1 for the sake of clarity, but is completely shown in Fig. 2.

In the normal position illustrated in Figs. 1 and 2,

the control means cannot turn in this manner, since it is locked by a locking means 6. A projecting member 17 is fixedly secured, for example welded, to one plate of control member 4, and has a shoulder 16 located opposite a hook-shaped projection 26 of the locking means 6. Locking means 6 has an arm engaged by a spring 21 which is secured to the frame of the machine, not shown, so that the locking means 6 tends to assume the illustrated locking position in which projection 26 engages shoulder 16, and locks control member 4 in the normal position of rest illustrated in Figs. 1 and 2.

Locking means 6 has another arm formed with a rectangular cutout 25 which receives the reduced end portion 24 of an operator influenced bar 22 which is shifted in longitudinal direction when a corresponding key, not shown, is moved to, and held in, an actuated depressed position. Locking means 6 has a fixed pin 23 which is turnably mounted in a corresponding bore in leg 3 of support 1. Therefore, when the operator influenced means 22 is shifted in longitudinal direction due to the actuation of the respective key, locking means 6 is turned in clockwise direction as viewed in Figs. 1 and 2, so that the projection 26 releases the shoulder 16 of control member 4 permitting the control member to move from the position illustrated in Fig. 2 to the position illustrated in Fig. 3 under the action of spring 12.

A holding means 5 is mounted on leg 3 of support 1 turnable about a pin 18. Holding means 5 includes an arm 28, and a hook-shaped projection 20 which is located opposite a shoulder 15 in control member 4. Shoulder 15 is aligned with shoulder 16 in the projecting member 17.

A spring 19 is secured to a projection on leg 3 of support 1 and to a projection on arm 28 of holding means 5 and urges holding means 5 into a holding position engaging shoulder 15 on control member 4 as will be explained hereinafter in greater detail. The holding means 5 in holding position is capable of holding control member 4 in its normal position of rest, but is normally in the inoperative position illustrated in Fig. 1.

Leg 2 of support 1 has an inner projection 11 which is engaged by a lateral projection 10 on the eccentric disc 9 in the normal position of rest of the mechanism. When control member 4 moves from the normal position of rest shown in Figs. 1 and 2 to the control position shown in Fig. 3 upon release by locking means 6, projection 10 moves away from projection 11.

The device illustrated in Fig. 1 is connected by linkages to an actuating member 40 which is operatively connected to the machine element which is to be actuated, and actuates the same to perform a single operation whenever the actuating member 40 moves from the normal position illustrated in Figs. 2 and 3 to the actuating position illustrated in Figs. 4 and 5.

A first linkage is connected to arm 27 of control member 4 and includes a rod 31, and a pin 131 located in a slot 29 in arm 27. The other end of rod 31 is articulated to a lever system including a lever 33 pivotally mounted on a pin 32 on the frame of the machine, another lever 37 pivotally mounted on a pin 36 on the frame of the machine, and a connecting link 35 articulated to levers 33 and 37 and being spring-loaded by a spring 34 which is secured to the frame of the machine.

Actuating member 40 has a slot 39 extending in longitudinal direction of the same, and receiving pin 38 which is fixed to lever 37. Actuating member 40 is under the influence of a spring 41 which is secured to the frame of the machine, and urges actuating member 40 into the normal position of rest illustrated in Figs. 2 and 3 in which pin 38 is located at the upper end of slot 39.

Actuating member 40 has an arresting projection 42 which cooperates with an arresting member 43. In the position illustrated in Figs. 2 and 3, arresting member 43 is inoperative, but when actuating member 40 is raised to the actuating position illustrated in Figs. 4 and 5, ar-

resting member 43 engages the projection 42, and arrests actuating member 40 in its actuating position, until upon retraction of arresting member 43, actuating member 40 is again free to return to its normal position of rest under the action of spring 41.

Actuating member 40 controls and actuates a machine element, for example a line-shifting device, a spacing device or a back-spacing device. Whenever actuating member 40 is moved to its actuating position, the respective device will be once actuated, for example shift the platen to another line position, or shift the carriage of the machine one space in forward direction, or shift the carriage of the machine one step in backward direction. The respective devices are of a mechanical construction in which upon completion of a single operation, the arresting member 43 is retracted to the inoperative position shown in Figs. 2 and 3, permitting return of actuating member 40 from its actuating position shown in Figs. 4 and 5 to its position of rest shown in Figs. 2 and 3.

Second linkage means connect the lower end of actuating member 40 with arm 28 of holding means 5. The second linkage means include a lever 45 mounted on a pin 44 on the frame of the machine, and articulated at its ends to actuating member 40 and to the end of a rod 46. The other end of rod 46 is provided with a fixed pin 130 slidable in a slot 30 in arm 28 of holding means 5. Pin 130 in slot 30 and pin 131 in slot 29 constitute lost motion means permitting a relative movement between arms 27, 28 and actuating member 40.

The other end of actuating member 40 has a slot 47 receiving a pin 48. The end of actuating member 40 has an arcuate face 40a on which lies a rib member 49 extending over the whole length of platen roll 57. The rib member 49 has arms 50 pivoted on a pin 51. The rib member 49 is under the influence of a spring 52 which is secured to the frame of the machine.

On one of the arms 50 is turnably mounted a bar 53 having a tooth 54 meshing with the teeth 55 of a toothed wheel 56 which is mounted together with the platen roll 57 on shaft 58.

Bar 53 has a slot 59 which cooperates with a pin 60 of a double-armed lever 62, pivoted on a pin 61. The free end of the lever 62 has an arcuate face 63 cooperating with the free end 64 of another lever 65 pivoted on a pin 66. The other end of lever 65 turnably supports the arresting member 43 resting on a stop 68 under the influence of a spring 67 which is secured to the frame of the machine.

The above described mechanism operates in the following manner:

When a key, not shown, is depressed by an operator, the operator influenced means 22 is shifted in direction of the arrow *a* in Fig. 2 so that locking means 6 turns about the axis of pin 23 on support 1 into a releasing position in which projection 26 releases shoulder 16 on the projecting portion 17 of control member 4.

Control member 4 turns under the action of spring 12 in clockwise direction about the axis of pin 7 so that shaft 8 of eccentric disc 9 moves in direction of the arrow *b* from the position illustrated in Fig. 2 to the position illustrated in Fig. 3 in which the periphery of the eccentric disc 9 frictionally engages the surface of the continuously rotating drive roll 13 and is rotated in direction of the arrow in Fig. 3.

Such rotation is possible, since the projecting member 10 on disc 9 has released the projecting portion 11 on leg 2 of support 1 during movement of control member 4 from the position shown in Fig. 2 to the position shown in Fig. 3.

During this movement of control member 4, arm 27 of the control means is also shifted, but no motion is transmitted to the linkage rod 31, since pin 131 can move in slot 29.

Since the eccentric disc 9 is rotated by drive roll 13 in the control position of Fig. 3, disc 9 will be turned in

counterclockwise direction into the position illustrated in Fig. 4 in which the axis of pin 8 is spaced a greater distance from the periphery of the drive roll 13 than in the position of Fig. 3. Consequently, the control member 4 turns with arm 27 in counterclockwise direction so that pin 131 is first engaged with the end of slot 29, whereupon the first linkage is shifted and moves in the direction of arrow *c* in Fig. 3. When the eccentric disc 9 is in the position shown in Fig. 4, members 31, 33, 35 and 37 are already shifted, and pin 38 has raised actuating member 40 to the actuating position shown in Fig. 4 in which the arresting member 43 has snapped under the arresting projection 42 to hold actuating member 40 in actuating position. The direction of the movement of actuating member 40 to the actuating position illustrated in Fig. 4, is indicated by the arrow *d* in Fig. 3. Spring 41 offers resistance to such movement.

As explained above, shifting of the actuating member 40 to its actuating position effects actuation of an element of the business machine, for example a single line shifting operation of the line shifting device. After such a single actuation, the line shifting device, or corresponding device, will retract arresting member 43, so that actuating member 40 is released after a single actuation, and will return to its normal position of rest under the action of spring 41.

During the movement of actuating member 40 in direction of arrow *d* to its actuating position, lever 45 turns and pulls rod 46 to the left in direction of the arrow *e* in Fig. 4 so that, after overcoming the lost-motion between pin 130 and slot 30, the holding means 5 is turned by its arm 28 in clockwise direction as viewed in the drawing.

At the same time spring 34 acts on lever 37 and turns the same from the position shown in Fig. 4 to the position shown in Fig. 5, while pin 38 moves in slot 39 of the arrested actuating member 40. While lever 37 turns, linkage rod 31 moves to the left in Figs. 4 and 5. When disc 9 has completed a single revolution, control member 4 has been shifted to its normal position by the linkage 31 under control of spring 34, so that projection 10 again engages projection 11 on support 1, and the turning of the eccentric disc 9 is stopped in the position illustrated in Fig. 5.

At this moment, holding means 5 has been turned in clockwise direction under control of linkage 31, 45 while actuating member 40 moved to its actuating position, so that the holding projection 20 of holding means 5 engages shoulder 15 of control member 4, as shown in Fig. 5, and temporarily holds control member 4 in its normal position.

During the movement of actuating member 40 in direction of arrow *d*, the arcuate face 40a of member 40 raises the rib member 49 which turns with arms 50 on pin 51. The bar 53 is moved in direction of the arrow *f* so that the tooth 54 of the bar 53 turns the toothed wheel 56 with the platen roll 57.

Before the end of its movement, bar 53 abuts with its slot 59 on the pin 60 of the lever 62 and turns the other lever 65 which moves the arresting member 43 in direction of the arrow *g*. This movement of arresting member 43 releases the projection 42 on the actuating member 40 which then returns to its normal position. Under the influence of springs 52 and 67, the rib member 49, the bar 53, arresting member 43 and the levers 65 and 62 return to their normal positions.

Single actuation

In the event that the operating key has been released in the meantime, the operator influenced means 22, illustrated in Figs. 1 and 2, and omitted in Figs. 3 to 5 for the sake of clarity, moves in a direction opposite to the direction of the arrow *a* under control of conventional spring means, not shown.

Locking means 6 is free to turn under the action of spring 21 about the axis of pin 23 to the locking position

in which projection 26 engages shoulder 16 of projecting member 17 of control member 4, which is possible since the holding means 5, 20 hold control member 4 in its normal position. Consequently, control member 4 is now held by both projections 20 and 26.

When the actuation of the respective machine element is completed, for example if the platen has been shifted by the line shifting device, arresting member 43 is automatically retracted by the respective device, for example by the line shifting device after a single actuation. Actuating member 40 moves to its normal position of rest shown in Figs. 2 and 3, under the action of spring 41. The linkage means 45, 46 move back to the position shown in Fig. 2. Holding means 5, 28 turns in counterclockwise direction as viewed in Fig. 2, so that projection 20 releases shoulder 15, and the device is again in its initial position in which the control means 4, 27, 9, 17 are held in normal position only by the shoulder 26 of locking means 6.

Repeat actuation

The first part of the operations described with reference to single actuation is the same when repeated actuation is desired. When the operator influenced means 22 are operated, locking means 6 releases control member 4, so that it moves to a control position in which eccentric disc is rotated by drive roll 13 and moves control member 4 from the first control position shown in Fig. 3 to the second control position shown in Fig. 4 effecting shifting of the actuation member 40 to its actuating position resulting in a single actuation. When actuating member 40 moves to its actuating position, the holding means 5 is turned in clockwise direction as above described, and temporarily holds the control member 4 in its normal position.

When repeated actuation is desired, the operator does not release the operating key, and the operator influenced means 22 remains in the advanced position in which locking means 6 is held in releasing position, so that locking projection 26 cannot engage and lock the control member. When after the first actuation, arresting member 43 under the control of the respective device in the machine, for example under control of the line shifting device, releases the actuating member 40, actuating member 40 returns under the action of spring 41 to its normal position of rest shown in Figs. 2 and 3 so that holding means 5 is turned through the linkage 45, 46 and arm 28 in counterclockwise direction effecting release of the control member 4 by the holding projection 20 of holding means 5. Since the locking means 6 are held in releasing position by the operator influenced means 22, and the holding means releases the control member 4 after return of the actuating member 4, control member 4 is free to move under the action of spring 12 to the control position illustrated in Fig. 2, so that the eccentric disc 9 is again rotated through a single revolution and all the operations described with reference to the single actuation are repeated a second time. It is evident that the operations will be repeated as long as locking means 6 is prevented by the operator influenced means from returning to its locking position.

At any time when the operator releases the operating key, not shown, and the operator influenced means 22 returns to the right as viewed in Fig. 2 and releases locking means 4, locking means 4 will return to its locking position locking control member 4 in its normal position in which it is temporarily held by the holding means 20 after each actuation. Since the locking means 6, 26 lock the control member 4, retraction of the holding means 5, 20 will not cause movement of the control member 4 toward the drive roll 13.

Not only a line-shifting device, but a spacing device, or a back-spacing device, or any other machine element which may be actuated once or several times, can be controlled by the actuating member 40. The devices used in connection with the mechanism of the present inven-

tion, must be provided with means for retracting the arresting member 43 after a single actuation, permitting return of the actuating member to its normal position of rest after each actuation. The particular construction of the respective devices is not an object of the present invention.

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 actuation devices for business machines, differing from the types described above.

While the invention has been illustrated and described as embodied in a mechanism for selectively effecting single actuation and repeated actuation of an element of an electric typewriter, 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. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means mounted on said support movable between a normal position and a control position engaging said drive roll for being reciprocated by the same; operator influenced means movable to and from an actuated position for effecting movement of said control means to said control position and for holding said control means in said control position so that said control means is once reciprocated by said drive roll if said operator influenced means is immediately released and is repeatedly reciprocated if said operator influenced means is maintained in said actuated position; holding means mounted on said support movable to and from a holding position for engaging and holding said control means in said normal position; and actuating means movable to and from an actuating position for effecting a single actuation of the machine element, said actuating means being operatively connected to said control means to be moved by the same to said actuating position when said control means is reciprocated, said actuating means being operatively connected to said holding means for moving the same to and from said holding position when moving to and from said actuating position so that after the first actuation of the machine element said control means can again move to said control position under control of said operator influenced means maintained in said actuated position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said control means returns to said normal position after a single actuation of the machine element.

2. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member mounted on said support movable between a normal position and a control position, and an eccentric disc rotatively mounted on said control member, said eccentric disc engaging said drive roll in said control position of said control member so that the same is reciprocated; operator influenced means movable to and from an actuated position for effecting movement of said control member to said control position and for holding said control member in said control position so that said control member is

once reciprocated by said drive roll if said operator influenced means is immediately released and is repeatedly reciprocated if said operator influenced means is maintained in said actuated position; holding means mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; and actuating means movable to and from an actuating position for effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member is reciprocated, said actuating means being operatively connected to said holding means for moving the same to and from said holding position when moving to and from said actuating position so that after the first actuation of the machine element said control member can again move to said control position under control of said operator influenced means maintained in said actuated position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said control member returns to said normal position after a single actuation of the machine element.

3. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member mounted on said support movable between a normal position and a control position, and an eccentric disc rotatively mounted on said control member, said eccentric disc engaging said drive roll in said control position of said control member so that the same is reciprocated, said eccentric disc engaging said support in said normal position of said control member in an initial position in which said eccentric disc is spaced from said drive roll, said disc releasing said support when said control member moves to said control position; operator influenced means movable to and from an actuated position for effecting movement of said control member to said control position and for holding said control member in said control position so that said control member is once reciprocated by said drive roll if said operator influenced means is immediately released and is repeatedly reciprocated if said operator influenced means is maintained in said actuated position; holding means mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; and actuating means movable to and from an actuating position for effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member is reciprocated, said actuating means being operatively connected to said holding means for moving the same to and from said holding position when moving to and from said actuating position so that after the first actuation of the machine element said control member can again move to said control position under control of said operator influenced means maintained in said actuated position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said control member returns to said normal position after a single actuation of the machine element.

4. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member mounted on said support movable between a normal position and a control position, and an eccentric disc rotatively mounted on said control member, said eccentric disc engaging said drive roll in said control position of said control member so that the same is reciprocated; operator influenced means movable to and from an actuated position for effecting movement of said control member to said control position and for holding said control member in said con-

trol position so that said control member is once reciprocated by said drive roll if said operator influenced means is immediately released and is repeatedly reciprocated if said operator influenced means is maintained in said actuated position; holding means mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; spring means on said support for urging said holding means into said holding position; actuating means movable to and from an actuating position for effecting a single actuation of the machine element; first linkage means connecting said actuating means with said control member so that said actuating means is moved by the same to said actuating position when said control member is reciprocated; and second linkage means connecting said actuating means to said holding means whereby said actuating means move said holding means to and from said holding position when moving to and from said actuating position so that after the first actuation of the machine element said control member can again move to said control position under control of said operator influenced means maintained in said actuated position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said control member returns to said normal position after a single actuation of the machine element.

5. A mechanism as set forth in claim 4 wherein said control member is pivotally mounted on said support; wherein said holding means is a holding lever pivotally mounted on said support and having a holding projection for engaging said control member; wherein said holding lever and said control member are formed with slots; and wherein said first and second linkage means include pins respectively located in said slots to provide a lost motion between said actuating means, and said holding lever and control member.

6. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member and an eccentric disc mounted on said control member rotatable about an axis, said control member being pivotally mounted on said support movable between an intermediate normal position, a first control position in which said axis is spaced a shorter distance and a second control position in which said axis is spaced a greater distance from said drive roll, said eccentric disc engaging said drive roll in said control positions of said control member so that the same is reciprocated between said first and second control positions; operator influenced means movable to and from an actuated position for effecting movement of said control member to said first control position so that said control member is once reciprocated by said drive roll if said operator influenced means is immediately released and is repeatedly reciprocated if said operator influenced means is maintained in said actuated position; holding means mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; actuating means movable to and from an actuating position for effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member is moved to said second control position, said actuating means being operatively connected to said holding means for moving the same to and from said holding position when moving to and from said actuating position so that after the first actuation of the machine element said control member can again move to said first control position under control of said operator influenced means maintained in said actuated position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said control member returns to said

normal position after a single actuation of the machine element.

7. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member and an eccentric disc mounted on said control member rotatable about an axis, said control member being pivotally mounted on said support movable between an intermediate normal position, a first control position in which said axis is spaced a shorter distance and a second control position in which said axis is spaced a greater distance from said drive roll, said eccentric disc engaging said drive roll in said control positions of said control member so that the same is reciprocated between said first and second control positions, said eccentric disc having a projection engaging said support in said normal position of said control member in an initial angular position in which the periphery of said eccentric disc is spaced from said drive roll, said projection releasing said support in said first control position of said control member; operator influenced means movable to and from an actuated position for effecting movement of said control member to said first control position so that said control member is once reciprocated by said drive roll if said operator influenced means is immediately released and is repeatedly reciprocated if said operator influenced means is maintained in said actuated position; holding means mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; and actuating means movable to and from an actuating position for effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member is moved to said second control position, said actuating means being operatively connected to said holding means for moving the same to and from said holding position so that after the first actuation of the machine element said control member can again move to said first control position under control of said operator influenced means maintained in said actuated position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said control member returns to said normal position after a single actuation of the machine element.

8. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member and an eccentric disc mounted on said control member rotatable about an axis, said control member being pivotally mounted on said support movable between an intermediate normal position, a first control position in which said axis is spaced a shorter distance and a second control position in which said axis is spaced a greater distance from said drive roll, said eccentric disc engaging said drive roll in said control positions of said control member so that the same is reciprocated between said first and second control positions, said eccentric disc having a projection engaging said support in said normal position of said control member in an initial angular position in which the periphery of said eccentric disc is spaced from said drive roll, said projection releasing said support in said first control position of said control member; spring means connected to said support and urging said control member to move to said first control position; operator influenced means movable to and from an actuated position for effecting movement of said control member to said first control position so that said control member is once reciprocated by said drive roll if said operator influenced means is immediately released and is repeatedly reciprocated if said operator influenced

means is maintained in said actuated position; holding means mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; spring means connected to said support and urging said holding means into said holding position; and spring-loaded actuating means movable to and from an actuating position and tending to return from said actuating position after effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member is moved to said second control position, said actuating means being operatively connected to said holding means for moving the same to and from said holding position when moving to and from said actuating position so that after the first actuation of the machine element said control member can again move to said first control position under control of said operator influenced means maintained in said actuated position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said control member returns to said normal position after a single actuation of the machine element.

9. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member mounted on said support, and an eccentric disc mounted on said control member rotatable about an axis, said control member being turnable between an intermediate normal position, a first control position in which said axis of said eccentric disc is spaced a shorter distance, and a second control position in which said axis is spaced a greater distance from said drive roll, said eccentric disc peripherally engaging said drive roll in said control positions of said control member, so that the same is reciprocated between said first and second control positions; locking means mounted on said support movable between a locking position for locking said control member in said normal position, and a releasing position; operator influenced means operatively connected to said locking means and being movable to and from an actuated position for moving said locking means to said releasing position and for holding the same in said releasing position, if desired; holding means mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; and actuating means movable to and from an actuating position for effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member moves to said second control position, said actuating means being operatively connected to said holding means for moving the same to and from said holding position when moving to and from said actuating position so that said control member is held in said normal position while said actuating means is in said actuating position, while movement of said actuating means out of said actuating position after the first actuation of the machine element effects movement of said holding means out of said holding position so that said control member can again move to said first control position when said operator influenced means maintained in said actuated position hold said locking means in said releasing position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said locking means moves to said locking position, locking said control member in said normal position after a single actuation of the machine element.

10. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support;

control means including a control member mounted on said support, and an eccentric disc mounted on said control member rotatable about an axis, said control member being turnable between an intermediate normal position, a first control position in which said axis of said eccentric disc is spaced a shorter distance, and a second control position in which said axis is spaced a greater distance from said drive roll, said eccentric disc peripherally engaging said drive roll in said control positions of said control member, so that the same is reciprocated between said first and second control positions; spring means on said support for urging said control member into said first control position; locking means mounted on said support movable between a locking position for locking said control member in said normal position, and a releasing position; spring means on said support for urging said locking means to said locking position; operator influenced means operatively connected to said locking means and being movable to and from an actuated position for moving said locking means to said releasing position and for holding the same in said releasing position, if desired; holding means mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; spring means on said support urging said holding means into said holding position; and actuating means movable to and from an actuating position and tending to return from said actuating position after effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member moves to said second control position, said actuating means being operatively connected to said holding means for moving the same to and from said holding position when moving to and from said actuating position so that said control member is held in said normal position while said actuating means is in said actuating position, while movement of said actuating means out of said actuating position after the first actuation of the machine element effects movement of said holding means out of said holding position so that said control member can again move to said first control position when said operator influenced means maintained in said actuated position hold said locking means in said releasing position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said locking means moves to said locking position, locking said control member in said normal position after a single actuation of the machine element.

11. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member mounted on said support, and an eccentric disc mounted on said control member rotatable about an axis, said control member being turnable between an intermediate normal position, a first control position in which said axis of said eccentric disc is spaced a shorter distance, and a second control position in which said axis is spaced a greater distance from said drive roll, said eccentric disc peripherally engaging said drive roll in said control positions of said control member, so that the same is reciprocated between said first and second control positions, said eccentric disc having a projection engaging said support in said normal position of said control member in an initial position in which the periphery of said eccentric disc is spaced from said drive roll, said projection releasing said support in said first control position of said control member; spring means on said support for urging said control member into said first control position; locking means mounted on said support movable between a locking position for locking said control member in said normal position, and a releasing position; spring means on said support for urging said locking means to said

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locking position; operator influenced means operatively connected to said locking means and being movable to and from an actuated position for moving said locking means to said releasing position and for holding the same in said releasing position, if desired; holding means mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; spring means on said support for urging said locking means to said locking position; and actuating means movable to and from an actuating position and tending to return from said actuating position after effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member moves to said second control position, said actuating means being operatively connected to said holding means for moving the same to and from said holding position when moving to and from said actuating position so that said control member is held in said normal position while said actuating means is in said actuating position, while movement of said actuating means out of said actuating position after the first actuation of the machine element effects movement of said holding means out of said holding position so that said control member can again move to said first control position when said operator influenced means maintained in said actuated position hold said locking means in said releasing position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said locking means moves to said locking position, locking said control member in said normal position after a single actuation of the machine element.

12. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member pivotally mounted on said support, and an eccentric disc mounted on said control member rotatable about an axis, said control member being turnable between an intermediate normal position, a first control position in which said axis of said eccentric disc is spaced a shorter distance, and a second control position in which said axis is spaced a greater distance from said drive roll, said eccentric disc peripherally engaging said drive roll in said control positions of said control member, so that the same is reciprocated between said first and second control positions, said eccentric disc having a projection engaging said support in said normal position of said control member in an initial position in which the periphery of said eccentric disc is spaced from said drive roll, said projection releasing said support in said first control position of said control member; spring means on said support for urging said control member into said first control position; locking means pivotally mounted on said support movable between a locking position for locking said control member in said normal position, and a releasing position; spring means on said support for urging said locking means to said locking position; operator influenced means operatively connected to said locking means and being movable to and from an actuated position for moving said locking means to said releasing position and for holding the same in said releasing position, if desired; holding means pivotally mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; spring means on said support urging said holding means into said holding position; and actuating means movable to and from an actuating position and tending to return from said actuating position after effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member moves to said second control position, said actuating means being operatively connected to said holding means

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for moving the same to and from said holding position when moving to and from said actuating position so that said control member is held in said normal position while said actuating means is in said actuating position, while movement of said actuating means out of said actuating position after the first actuation of the machine element effects movement of said holding means out of said holding position so that said control member can again move to said first control position when said operator influenced means maintained in said actuated position hold said locking means in said releasing position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said locking means moves to said locking position, locking said control member in said normal position after a single actuation of the machine element.

13. A mechanism for selectively effecting single actuation and repeated actuation of a machine element and comprising, in combination, a rotary drive roll; a support; control means including a control member pivotally mounted on said support, and an eccentric disc mounted on said control member rotatable about an axis, said control member being turnable between an intermediate normal position, a first control position in which said axis of said eccentric disc is spaced a shorter distance, and a second control position in which said axis is spaced a greater distance from said drive roll, said eccentric disc peripherally engaging said drive roll in said control positions of said control member, so that the same is reciprocated between said first and second control positions; locking means pivotally mounted on said support movable between a locking position for locking said control member in said normal position, and a releasing position; operator influenced means operatively connected to said locking means and being movable to and from an actuated position for moving said locking means to said releasing position and for holding the same in said releasing position, if desired; holding means pivotally mounted on said support movable to and from a holding position for engaging and holding said control member in said normal position; and actuating means movable to and from an actuating position for effecting a single actuation of the machine element, said actuating means being operatively connected to said control member to be moved by the same to said actuating position when said control member moves to said second control position, said actuating means being operatively connected to said holding means for moving the same to and from said holding position when moving to and from said actuating position so that said control member is held in said normal position while said actuating means is in said actuating position, while movement of said actuating means out of said actuating position after the first actuation of the machine element effects movement of said holding means out of said holding position so that said control member can again move to said first control position when said operator influenced means maintained in said actuated position hold said locking means in said releasing position whereby said actuating means is again moved to said actuating position, while upon release of said operator influenced means, said locking means moves to said locking position, locking said control member in said normal position after a single actuation of the machine element.

14. A mechanism as set forth in claim 13 and including first linkage means for connecting said actuating means with said control member; and second linkage means for connecting said actuating means with said holding means, said first and second linkage means including lost-motion means.

15. A mechanism as set forth in claim 13 wherein said locking means has a hook-shaped locking portion; wherein said holding means is a holding lever having a hook-shaped holding portion; wherein said control member includes two parallel fixedly connected portions and a projecting member secured to one of said portions, shoulders being formed on said projecting member and on said

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one portion of said control member; and wherein said hook-shaped holding portion engages the shoulder on said one portion of said control member in said holding position of said holding means, and said hook-shaped locking portion engages said shoulder on said projecting member in said locking position of said locking means.

16. A mechanism as set forth in claim 13 wherein said support is a U-shaped member having one leg pivotally supporting said holding means and said locking means, and another leg pivotally supporting said control member.

17. A mechanism as set forth in claim 13 wherein said actuating means include a spring-loaded actuating member operatively connected to said holding means, and a spring-loaded lever system connected to said actuating means and operatively connected to said control member; and means adapted to be controlled by said machine element to lock said actuating member in said actuating position, and to release said actuating member to move out of said actuating position after completion of a single operation of the machine element.

18. A mechanism as set forth in claim 13 wherein said disc has a lateral projection; and wherein said support has an inner projection located in the path of movement of said projection of said eccentric disc when

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said control member is located in said normal position, and located out of said path in said first control position of said control member.

19. A mechanism as set forth in claim 13 wherein said holding means includes a lever arm formed with a slot; wherein said control member includes a lever arm having a slot; and including first linkage means connecting said actuating means with said arm of said control member and including a pin located in said slot of the same; and second linkage means for connecting said actuating means with said arm of said holding means and including a pin located in said slot of said arm of said holding means.

20. A mechanism as set forth in claim 13 wherein said operator influenced means includes a bar having a reduced end portion; and wherein said locking means is formed with a cutout receiving said reduced end portion of said bar.

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