Jan. 5, 1954 R. A. SCHACHT 2,664,985

MARKING MACHINE

Filed June 24, 1950 4 Sheets-Sheet 1

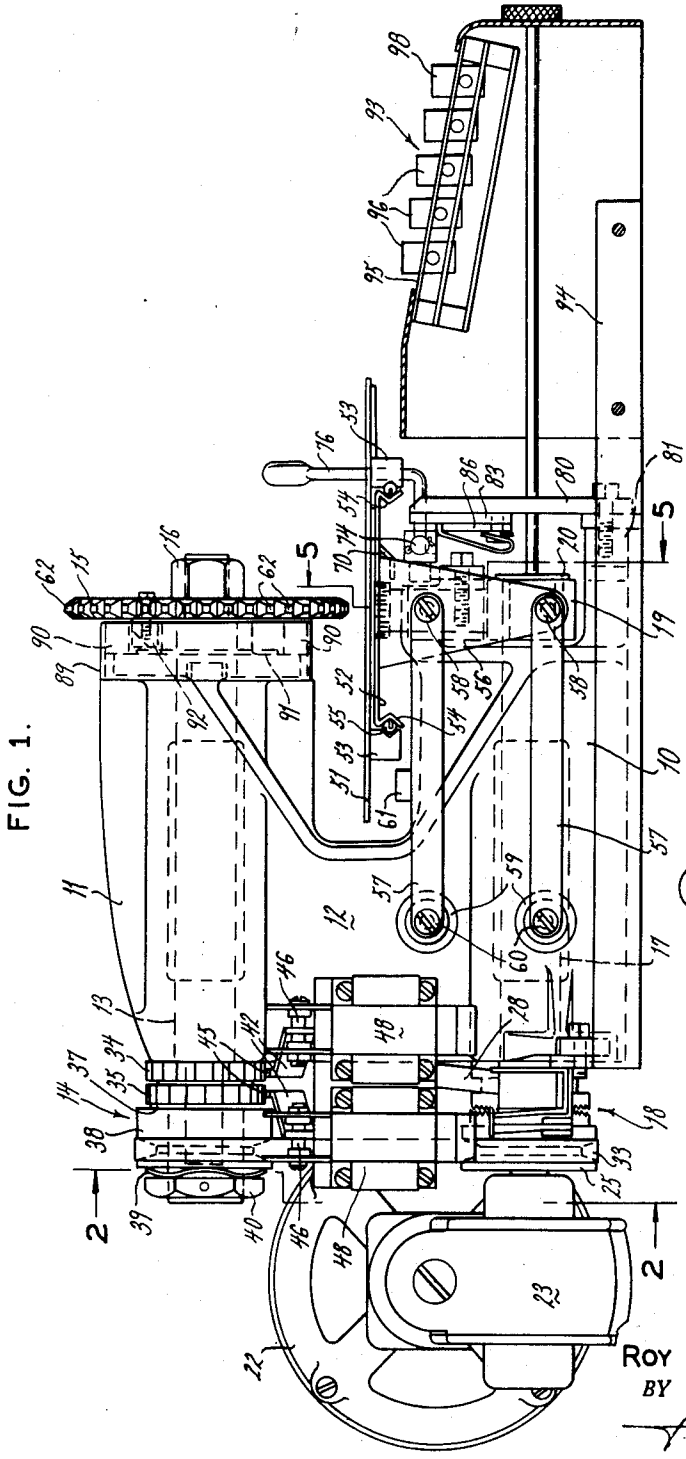

FIG. 1.

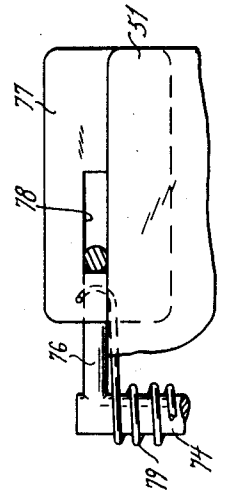

FIG. 11.

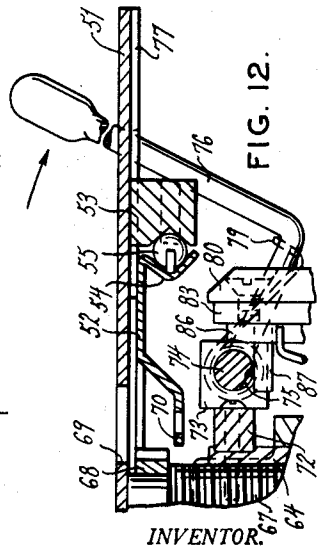

FIG. 12.

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MARKING MACHINE

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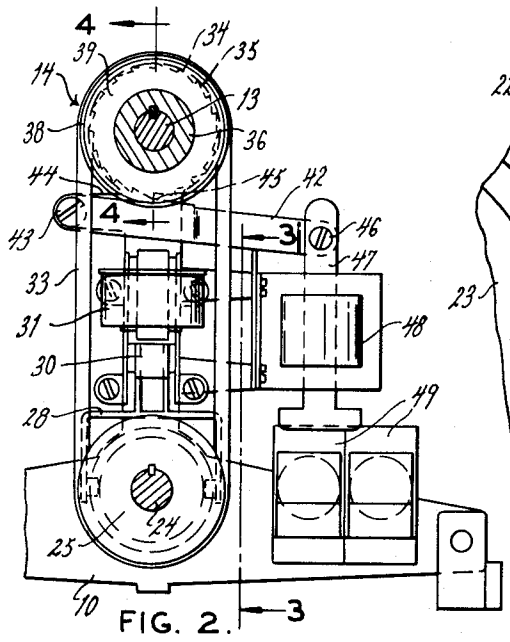

FIG. 2.

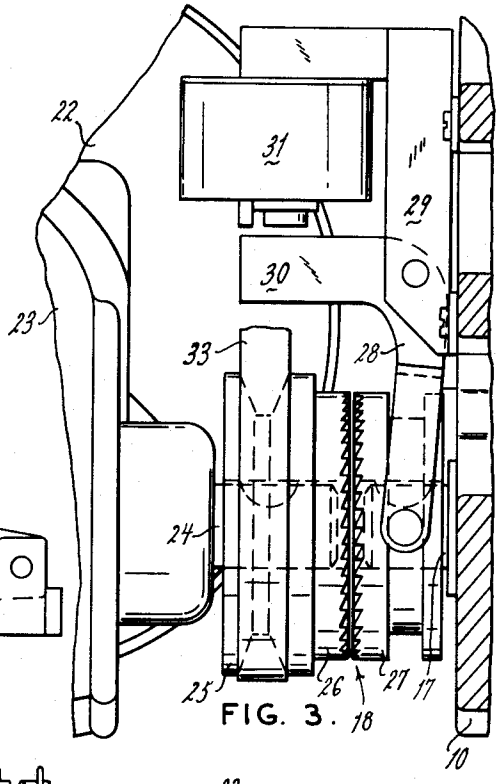

FIG. 3.

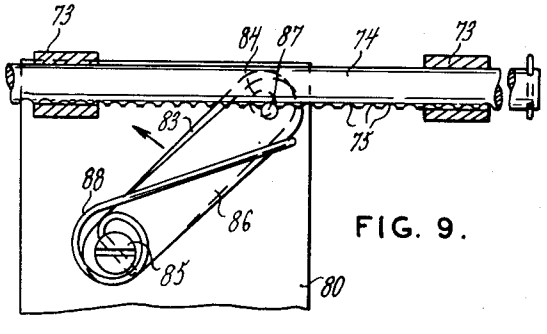

FIG. 9.

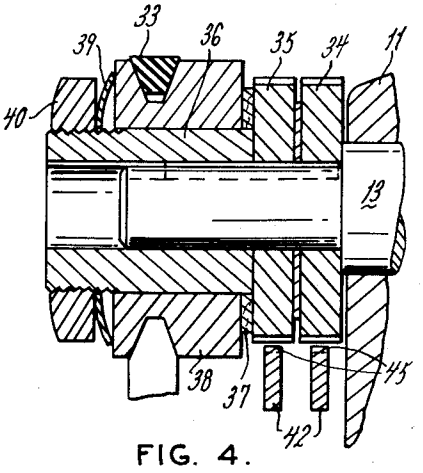

FIG. 4.

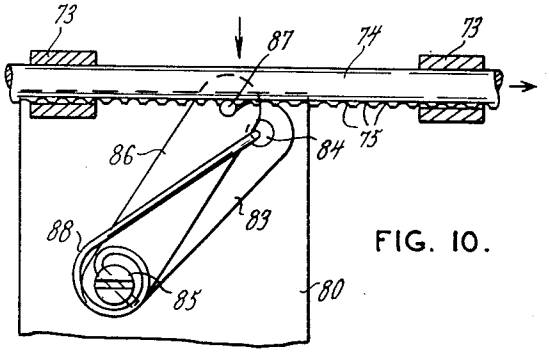

FIG. 10.

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MARKING MACHINE

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FIG. 5.

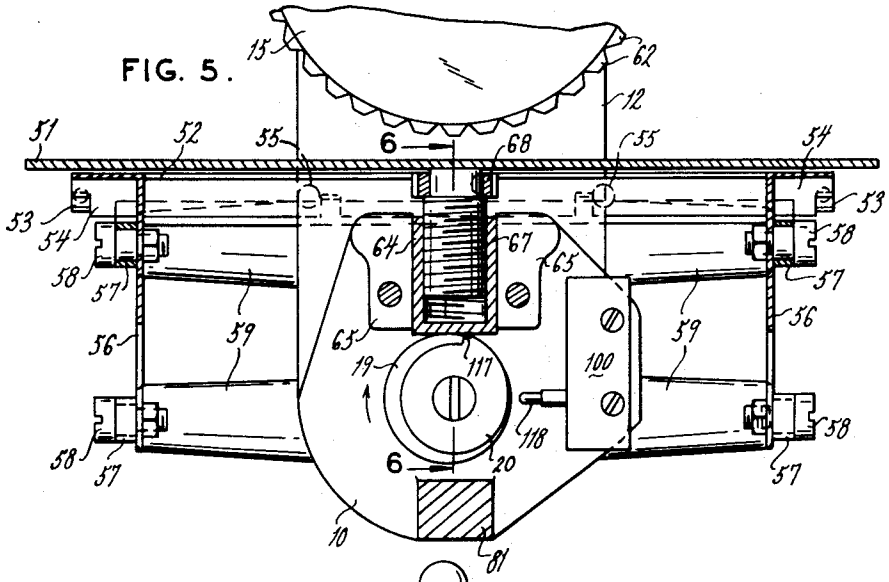
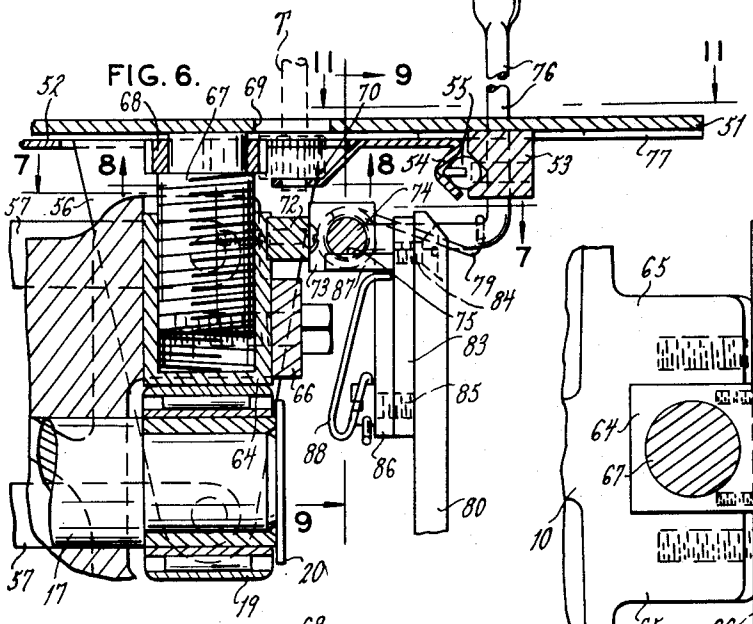


FIG. 6.



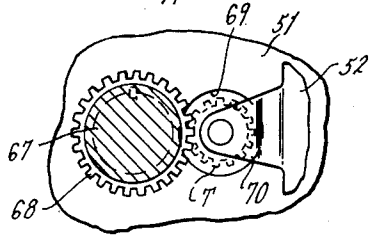


FIG. 8.

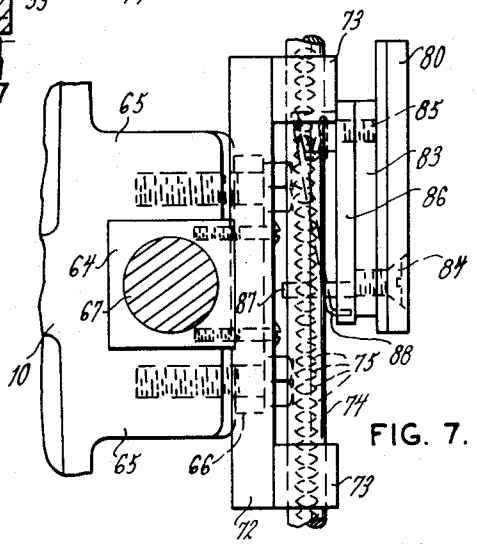


FIG. 7.

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MARKING MACHINE

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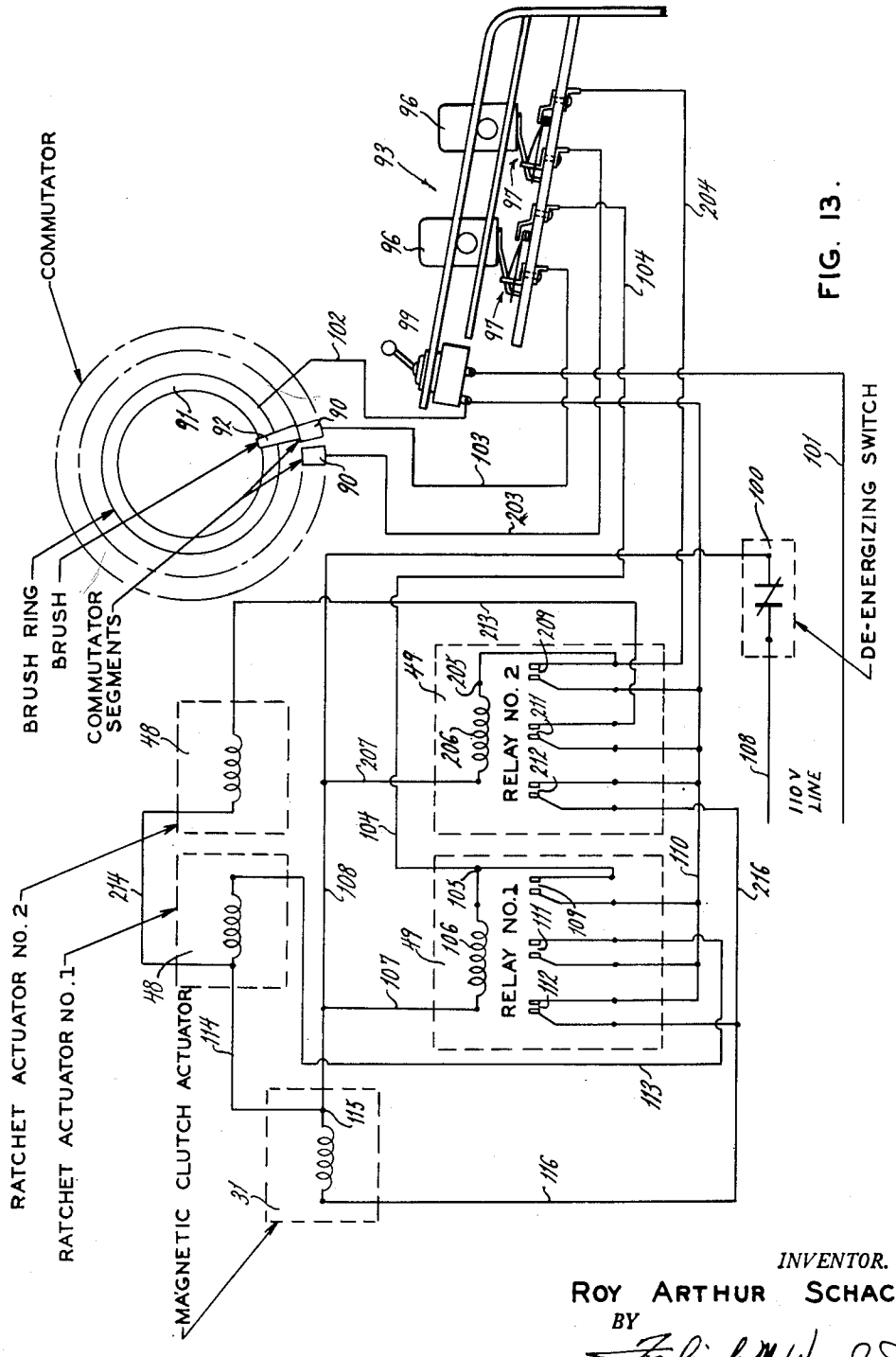

FIG. 13.

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UNITED STATES PATENT OFFICE

2,664,985

MARKING MACHINE

Roy Arthur Schacht, Kirkwood, Mo.

Application June 24, 1950, Serial No. 170,175

6 Claims. (Cl. 197—6.5)

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This invention relates to machines adapted generally for stamping, impressing or marking desired indicia upon name plates, strips, tags or the like whether such objects are of metal or other material suitable for the purpose.

It is an object of the invention to provide a marking machine which is relatively less complicated as to its construction and in its operational characteristics than similar machines.

It is also an object of the invention to provide a few principal operating parts for the machine and to simplify the coaction or cooperation thereof so that a marked increase in speed of marking may be obtained.

It is a further object hereof to provide a marking machine which has control keys arranged according to the standard typewriter key board system, and to provide a simple electrical circuit for translating the control key operation into direct and positive actuation of the principal parts of the machine.

It is a still further object of the invention to provide support means, in an improved marking machine, for accommodating various size objects to be marked and to actuate such means in coordination with the selection of a character to be stamped so that the actuation thereof may be utilized to effect feeding movement of the object for selectively spacing the successive characters.

It is a further object to provide an improved marking machine which is easily and economically constructed and possesses relatively simple operational characteristics conducive to increased speed of operation, all as will be hereinafter more fully described in connection with a presently preferred example disclosed in the accompanying drawing, wherein:

Fig. 1 is a side elevational view of the assembled machine which forms the basis of the invention, there being certain portions thereof shown in section for the purpose of providing detailed disclosure;

Fig. 2 is a fragmentary end elevational view, partly in section, as seen at line 2—2 of Fig. 1;

Fig. 3 is an enlarged, but fragmentary side elevational view of certain operating parts of the machine disclosed by Fig. 1;

Fig. 4 is an enlarged sectional view taken at line 4—4 of Fig. 2;

Fig. 5 is an enlarged elevational view, partly in transverse section, as seen at line 5—5 in Fig. 1;

Fig. 6 is a sectional elevational view at line 6—6 of Fig. 5;

Fig. 7 is a sectional detail view taken at line 7—7 in Fig. 6;

Fig. 8 is a fragmentary detail of Fig. 6 as seen along line 8—8;

Figs. 9 and 10 are detail views in elevation

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showing different operational phases, of the means for moving the support means at successive marking operations, the view of Fig. 9 being taken at line 9—9 in Fig. 6;

Fig. 11 is a further fragmentary plan view, taken at line 11—11 of Fig. 6;

Fig. 12 is a fragmentary view of the mechanism shown by Fig. 6 and indicates the operation thereof; and

Fig. 13 is a schematic wiring diagram for the marking machine to indicate the characteristics of the various circuits embodied therein.

Referring to the several views in the drawing, specifically Figs. 1, 2 and 5, the marking machine includes a frame structure having a base portion 10, a head portion 11, a connecting body portion 12 arranged to position the base and head portions in vertically spaced relation so that these portions extend forwardly to form a space or gap therebetween for the mounting of certain parts of the machine later to be described.

The head portion 11 is adapted to receive a shaft 13 extending therethrough, the rearward end of the shaft carrying controllable means in the nature of a clutch assembly 14 and the forward end carrying a marking wheel 15 retained by nut 16. The base portion 10 is adapted to receive a shaft 17 (Figs. 1, 3 and 6), the rearward end of which mounts the operating parts of controllable means in the form of a clutch assembly 18 (Fig. 3) and the forward end carries an eccentric or cam 19 and a control cam 20 later to be noted.

At the rear of the frame structure there is mounted an electrical drive motor 22 coupled to a suitable power transmission gear unit 23 from which the power shaft 24 extends and is substantially axially aligned (Fig. 3) with the lower shaft 17. Shaft 24 rotates a pulley 25 and a power take-off clutch member 26, the latter being adapted to engage a complementary clutch member 27 splined on shaft 17 so as to rotate therewith and be axially shiftable in known manner. Clutch member 27 of the controllable means 18 is normally held out of engagement with member 26 by the yoke actuator lever 28, the lever being pivoted on a bracket at 29 so that an overhanging arm portion 30 may be operated or moved by means of a suitable actuator unit 31 later to be noted.

The controllable means or clutch assembly 14 on the shaft 13 is driven from the lower pulley 25 by a suitable belt 33. Reference will now be made to Figs. 1 and 4, wherein the clutch assembly 14 may be seen to include a pair of toothed clutch rings 34 and 35 keyed to a reduced end portion of shaft 13, a collar 36 also keyed to shaft 13, a suitable friction disc 37 on collar 36, and a pulley 38 which is freely revolvable on the

collar 36. The free pulley 38 is normally pressed against the friction disc 37 by a wave-type spring 39 which is adjustable as to its load on the pulley due to the threaded retainer nut 40 on the outer end of the collar. Normally, the pressure of the spring 39 is sufficient to cause a friction coupling of the free pulley 38 with the adjacent clutch ring 35, whereby the rotation of the pulley is transmitted to shaft 13 and drives the marking wheel 15.

Operably associated with the clutch assembly 14 are a pair of clutch levers 42 (Figs. 1, 2 and 4) pivotally mounted at 43 on a frame extension 44 at one side of the axis of the shaft 13. Each of these levers is provided with a tooth or similar projection 45 which, at predetermined times, engages the teeth on the clutch rings 34 and 35. Each lever 42 is operably connected at 46 to the upper end portion of an actuator member 47, the body of the actuator being shown generally at 48. The provision of two similar actuators 48 and two levers 42 will further appear. In association with each actuator 48 there is provided a suitable relay device 49 which acts to hold the actuators 48 and 31 energized for a desired time interval.

Turning now to Figs. 1, 5 and 6, the marking machine includes a support member for an object to be marked in the form of a tablelike platen 51 and a carrier frame 52 disposed in the gap between the base and head portions 10 and 11, and operable below the marking wheel 15. Platen 51 carries suitable means (not shown) for securing the object to be marked in proper position. The platen is operably carried upon the said frame 52 by means of spaced parallel ways 53 on the under surface of the platen and cooperating complementary ways 54 constituting portions of frame 52. These pairs of ways 53 and 54 are suitably grooved and receive ball elements 55 upon which the platen 51 may roll during its movement in the direction of the ways, which in the present machine is transversely of the axis of marking wheel shaft 13.

In the view of Figs. 1 and 5, it can be seen that the platen must have a vertical motion to effect a printing operation. To obtain this vertical movement and maintain platen 51 in proper angular position, the frame 52 is formed with spaced depending legs 56, and each of these legs is pivotally secured upon radius arms 57, there being a pair of such arms for each leg as shown in Fig. 5, and suitable pivot elements 58 are used to secure the arms. Arms 57 extend rearwardly at opposite sides of frame base 10 and are pivotally anchored upon lateral arm elements 59 (Figs. 1 and 5) by means of elements 60. The opposite upper pair of arms 57 are united by a crossbrace 61 to prevent any uneven motion between the opposite arms and to aid in simultaneous movement thereof. The radius arms 57 together with the legs 56 of frame 52 constitute a parallelogram system whereby any vertical movement of the frame 52 is accompanied by a necessary correction action of the arms to maintain the platen 51 always parallel to the position indicated at Fig. 1, which is its at rest position.

It will now be appreciated that the platen is capable of vertical movement, or a rising and falling motion relative to the printing wheel 15, so that any one of the characters formed on the peripheral die elements 62 of the wheel 15 may be pressed against the object carried on the platen during the rising motion thereof.

The means provided for thus actuating or cycling the platen 51 (Figs. 1, 5, 6 and 7) comprises the eccentric member 19 on shaft 17 in driving contact with a slide block 64 guided in a vertical direction between guide shoulders 65 formed on the forward end of base portion 10. Block 64 is held in position by a retainer plate 66 bolted to the shoulders 65. Slide block 64 is internally threaded to receive an adjustable thrust member 67 having its upper end in bearing engagement at the under surface of the frame 52. The thrust member 67 carries a fixed gear element 68 (Figs. 6 and 8) by means of which it may be turned to increase the overall length of slide block and thrust member for arriving at a proper heighth setting of the platen for determining the printing pressure desired. To reach the adjustment gear 68, platen 51 is apertured at 69 directly above a down struck ear 70 on the frame 52. Ear 70 is apertured to provide a bottom guide socket (Fig. 6) for a suitable gear tool T, shown in phantom, which meshes with gear 68 for purposes of adjusting the member 67.

The rising and falling motion of the platen 51 is utilized to provide the necessary actuation of means for advancing the platen after each printing stroke. With reference to Figs. 1, 6, 7, 9, 10 and 12, the slide block 64 is seen to carry an elongated bracket 72 at a zone just above the retainer plate 66, and this bracket has guide blocks 73 formed at its opposite ends for the mounting of a ratchet rod 74 having a plurality of indentations or blunt teeth 75 along one side thereof. Thus the rod rises and falls with the platen, and means is provided to fix the rod 74 for movement with the platen and thus for axial movement through the guide blocks 73. Such means may be combined with an operating lever 76 (Figs 11 and 12) and comprises a plate element 77 removably fixed to platen 51 and formed with an elongated slot 78 which closely engages the lever 76 to prevent its movement axially. However, the lever 76 may be swung in an angular direction through the limit of the slot 78 to assume either an upright or normal position (Figs. 1 and 6) or a release position (Fig. 12). A spring 79 holds lever 76 in normal position.

Working in conjunction with the toothed ratchet rod 74, there is provided an automatically operative platen feed mechanism shown in Figs. 6, 7, 9 and 10, and in some detail in Fig. 1. This mechanism is carried on a fixed support 80 attached to the base portion 10 of the frame at 81. Support 80 carries a pivot lever 83 adjustably secured thereto by screw 84 at its upper end. The opposite and lower end of lever 83 carries a pivot pin 85 which retains one end of a thrust lever 86, while the opposite end of lever 86 extends upwardly and carries a dog element 87 adapted to engage in the teeth 75 of rod 74. The thrust lever 86 is normally urged toward a vertical position by a spring 88, as shown in Figs. 6 and 9, the spring having its anchorage at pin 85.

The operation of the platen feed mechanism above described is shown in Figs. 9 and 10. Fig. 9 illustrates the at rest position thereof when the platen 51 is fully lowered. Observe that the dog element 87 of thrust lever 86 engages a tooth 75 under urging of spring 88. In Fig. 10, the platen is raised and hence raises the ratchet rod 74 relative to the thrust lever 86. In so doing, the dog element 87 is caused to move backwardly over the teeth 75 during its upward pivoting movement and engages a new tooth, either one or several teeth removed from that one engaged

when in the position of Fig. 9. Now as the rod 74 falls the dog 86 thrusts the rod 74 in a feed direction and moves the platen accordingly. The distance moved at each feed of the platen depends upon the angularly adjusted position of the lever 83 and, in turn, the position of the pivot 85 for thrust lever 86. Thus, in the view of Fig. 9, if the pivot pin 85 is moved upwardly or closer to the axis of the rod 74 the feed stroke of the platen will be decreased. When it is desired to restore the platen to its starting position, toward the right in Fig. 5, the lever 76 is drawn forwardly from the position of Fig. 6 to that in Fig. 12 so that the rod 74 is sufficiently rotated to carry the teeth 75 out of the path of the dog element 87.

From the foregoing description, it should be clear that operation of motor 22 drives pulley 25 and clutch member 26 of the normally disengaged clutch assembly 18. Rotation of pulley 25 drives the upper pulley 38 of the clutch assembly 14 and due to the normally disengaged clutch levers 42, the friction disc couples the pulley to shaft 13 so that the printing wheel 15 is continually rotated. At this time shaft 17 is not rotating and the platen 51 is in its down position with the eccentric 19 at bottom center position.

The frame head portion 11 is provided (Fig. 1) with a commutator housing 89 having as many individual commutator segments 90 as there are dies 62 on the wheel 15. This housing also carries a brush ring 91 which cooperates with a brush element 92 fixed to the wheel 15. The brush is adapted to maintain ring contact and also sweep the annular series of commutator segments 90, as is well understood in the art. Associated with the commutator segments 90 is a key board control assembly 93 secured to the frame base 10 by means of the extension arms 94 at each side. This assembly comprises a panel 95 carrying keys 96 (Figs. 1 and 13) which are operatively associated with small switch units 97, there being a key 96 and a switch 97 for each of the characters on the printing wheel 15. In the present machine forty keys are provided and they are arranged in accordance with the standard typewriter key board, there also being a spacer bar 98 as indicated in Fig. 1.

In order to attain greater speed and positive operation of the printing cycle, the keys 96 and the commutator segments 90 are divided into two groups corresponding with the two ratchet rings 34 and 35, and the actuator operated ratchet levers 42 therefor. The use of two rings 34 and 35 greatly assists, in selecting a ratchet having properly sized teeth equal in number to the group of keys 96 assigned for operation of either actuator 48. Since there is some slight time lag in the actuator response to key operation, it is to be preferred that the ratchet rings 34 and 35 be formed with large teeth having a greater arc length than would be the case if a single ratchet were employed having forty teeth.

Operation of the marking machine will be described in connection with Fig. 1 and the schematic wiring circuit of Fig. 13, with reference to certain other views as may be necessary. The machine is started upon actuation of a starting switch (not shown) which energizes the motor 22 and thereby initiates rotation of marking wheel 15 through the belted drive at clutch assembly 14. Actuator 31 for the clutch assembly 18 at lower shaft 17 and actuators 48 for the clutch assembly 14 are not energized and therefore shaft 17 is

not rotated. Actuation of printing switch 99 to its on position supplies current to the several circuits controlled by the keys 96, but none of these circuits is energized until a key 96 is depressed to actuate switch 97 to closed position. The diagram of Fig. 13 includes only one representative circuit for each of the two key groups before mentioned, it being understood that there are forty such circuits in all, or any number according to the number of keys 96 required. In this diagram it is clear that the upper left key 96 and its switch 97 is associated with the right hand one of the commutator segments 90, such segment being that one shown making contact with the brush 92 on the marking wheel 15. Tracing this circuit, current from one side 101 of the supply line leads to the switch 99 and by lead 102 connects with the brush ring 91 so that the brush 92 is always in one side of the circuit. Since the final completion of the circuit is made between brush 92 and segment 90, the circuit from segment 90 is seen to include lead 103 to switch 97 and lead 104 from switch 97 to terminal 105 at number one relay 49. The relay coil 106 is connected by lead 107 to the opposite side of the power supply line at lead 108, and this lead 108 has a de-energizing switch 100 inserted therein for a purpose later appearing. Energization of relay coil 106 closes the contacts 109 so that the lead 110 from switch 99 places the relay coil 106 across the lines 101—108 to constitute a holding circuit for the relay. At this time key 96 may be released. Simultaneously with closure of contacts 109, a second pair of contacts 111 and a third pair of contacts 112 are closed. Contacts 111 are connected by lead 113 to the number one actuator 48 and the opposite side of the actuator is connected by lead 114 to the power supply line 108 at terminal 115 for the actuator 31. Contacts 112 act to place actuator 31 in the main circuit through the lead connection 116. It should be understood that the above described circuits for number one relay 49, number one actuator 48 and actuator 31 are not actually completed upon depressing said key 96 and resulting closure of switch 97 thereof, but merely establishes a proper circuit so that when the printing wheel 15 rotates to bring its brush 92 into contact with the selected commutator segment 90 the circuit is established. At this time the number one actuator 48 raises its clutch lever 42 (Fig. 2) to engage the clutch ring 34 or 35, as the case may be, and stop the wheel 15 at the proper position for marking of that character. Concurrently, actuator 31 acts to shift the clutch yoke 28 (Figs. 2 and 3) so that clutch parts 26 and 27 mesh and constitute the driving connection by which shaft 17 is rotated. Rotation of shaft 17 drives the eccentric 19 (Figs. 1 and 5) for lifting the platen 51 in its marking stroke. A single revolution of eccentric 19 is required to complete the marking cycle, and at a predetermined point in the falling movement of the platen, or rotation of eccentric 19, the control cam 20 adjustably secured to the eccentric 19 acts through its lobe 117 to open the de-energizing switch 100, as by lobe 117 striking the switch button 118 (Fig. 5).

Referring again to Fig. 13, it can be appreciated that opening of switch 100 breaks all of the holding circuits created at number one relay 49, and each of the contact pairs 109, 111 and 112 are opened. At this time, the clutch assembly 18 disconnects and the clutch assembly 14 is released to re-establish its driving operation. Accordingly, shaft 17 comes to rest and shaft 13 begins

rotation, thereby signifying the completion of a full cycle of operation.

The remaining circuit of Fig. 13 for the lower right hand key 93 is substantially identical to that above described, and therefore the several portions of the circuit will be identified by reference characters corresponding to those applied in the first circuit, but increased by one hundred. Thus depression of the last said key 96 creates a circuit from the left hand commutator segment 99 through lead 203, switch 97, lead 204 to terminal 205 at number two relay 49, and from relay coil 206 to lead 207 and line 103. Coil 206 actuates each of the contact pairs 209, 211 and 212 into closed positions. Contacts 209 establish the required circuits for the relay and actuators 43 and 31. Contacts 211 make the circuit from lead 110 through lead 213 to the number two actuator 43 and lead 214 completes the connection to lead 114 and back to the lead 108 at terminal 115. Contacts 212 make the circuit from lead 110 through the lead 216 to lead 116 and actuator 31 as before described.

It should be understood that the deenergization switch 100 will function to break each of the forty or more circuits in the machine after shaft 17 has made one revolution, and that breaking of each such circuit automatically re-establishes the rotation of the marking wheel 15 until a subsequent key 96 is depressed.

The above described embodiment of the invention is given by way of example of a preferred construction, and it is to be understood that changes or modifications flowing from the present description shall fall within the spirit and scope of the improvements as the same are defined in and by the following claims.

I claim:

1. In a marking machine, upper and lower shafts, a marking wheel carried by said upper shaft, said marking wheel having marking characters thereon, an eccentric member carried by said lower shaft below said marking wheel, an object supporting platen movably positioned between said marking wheel and eccentric member, said eccentric member moving said platen toward said marking wheel to effect an object marking operation, slip clutch means for said upper shaft, normally open clutch means for said lower shaft, motor means driving both said slip clutch and normally open clutch means, ratchet ring means fixed on said upper shaft, electrically operated ratchet lever means for said ratchet ring means to engage said latter means for stopping rotation of said upper shaft and said marking wheel in selected marking position, electrically operated clutch actuator means for closing said normally open clutch means to rotate said lower shaft and eccentric member for moving said platen to mark the object thereon, key operated switches corresponding to each of said marking wheel characters, circuit connections between said switches and said electrically operated ratchet lever means and clutch actuator means for controlling concurrently both of the latter means to effect a marking operation with operation of a selected key operated switch, circuit interrupting means adjacent said eccentric member for interrupting the circuit established by the selected key operated switch to conclude each marking operation, and means connected into said circuits for correlating each marking wheel character with a key operated switch including stationary contact elements and a brush rotating with said marking wheel and sweeping said contact elements to complete the selected circuit.

2. In a marking machine, upper and lower spaced parallel shafts having corresponding forward and rearward ends, an object supporting platen movably positioned between the forward ends of said shafts, a marking wheel having marking characters about its periphery carried at the forward end of said upper shaft above said platen, an eccentric at the forward end of said lower shaft below said platen, slide means connecting said platen and eccentric to move said platen upon eccentric operation to effect a marking operation, motor means for said shafts, a slip clutch on the rearward end of said upper shaft connected to said motor means for continuously rotating said upper shaft, a normally open clutch between said motor means and the rearward end of said lower shaft, an electrically responsive actuator means connected with said normally open clutch for closing the latter to rotate said lower shaft, a plurality of key operated switches corresponding with said marking wheel characters, a plurality of electrical contact elements corresponding to said key operated switches, a brush rotating with said marking wheel and arranged to sweep said contact elements, circuit connections between said key operated switches, contact elements, rotating brush and actuator means for connecting upon actuation of a selected key operated switch the corresponding contact element and said rotating brush to form a circuit with said actuator means to connect said normally open clutch and rotate said eccentric for moving said platen toward said marking wheel in a marking operation, and electrically responsive ratchet means including a ratchet ring on said upper shaft for inclusion in said circuit connections to stop said upper shaft and marking wheel at a position which corresponds with the selected key operated switch for the marking character so selected.

3. In a marking machine, upper and lower spaced parallel rotary shafts having corresponding forward and rearward ends, a platen movably positioned between the spaced forward ends of said shafts for supporting an object to be marked, a marking character rotary wheel at the forward end of said upper shaft above said platen, platen moving means adjacent the forward end of said lower shaft including an eccentric rotating with said lower shaft for moving said platen toward said marking wheel to effect a marking operation on the object, normally open clutch means at the rearward end of said lower shaft, electrically responsive clutch actuator means adjacent said normally open clutch means for closing the latter to rotate said lower shaft and eccentric, motor means driving said normally open clutch means, slip clutch means on the rearward end of said upper shaft connected with said motor means for normally continually rotating said upper shaft and marking wheel, ratchet ring means fixed to said upper shaft, a pair of electrically responsive ratchet engaging levers disposed adjacent said ratchet ring means for selectively engaging the latter to stop rotation of said upper shaft and marking wheel during a marking operation, a plurality of key operated switches corresponding to the marking characters on said marking wheel, said key operated switches being divided into two groups, separate electrical circuits betweeen said two groups of key operated switches and said pair of electrically responsive ratchet levers, two groups of electrical contact

elements corresponding to and connected with said two groups of key operated switches, a single brush rotating with said marking wheel for sweeping all of said electrical contact elements to make a circuit through either of said groups of electrical contact elements selected by a key operated switch with one of said electrically responsive lever means to stop marking wheel rotation at the marking character desired, and a circuit connection from said clutch actuator means to both of said ratchet lever means for closing said normally open clutch to rotate said eccentric and effect a marking operation.

4. In a marking machine, a frame having spaced parallel base and head portions and an interconnecting body portion at the rearward ends of said base and head portions providing a gap between the latter portions at the forward ends thereof, a first shaft in said head portion extending at the forward and rearward ends of the latter, a second shaft in said base portion extending at the forward and rearward ends of the latter, an object supporting platen movably mounted in said gap, platen moving means at the forward end of said base portion including a platen operating eccentric on said second shaft, a marking wheel with marking characters thereon carried by said first shaft over said platen at the forward end of said head portion, a slip clutch on said first shaft at the rear end of said head portion, ratchet means on said first shaft adjacent said slip clutch, a normally open clutch on the rear end of said second shaft, motor means drivingly connected with said slip clutch and said normally open clutch for rotating both shafts, separate electrically energized devices adjacent said ratchet means and said normally open clutch for simultaneously engaging said ratchet means to stop rotation of said first shaft and for closing said normally open clutch to rotate said second shaft, key operated switches corresponding with the marking wheel characters disposed at the forward end of said base portion, circuit connections between each of said key operated switches and said electrically responsive devices for energizing the latter upon operation of a selected key operated switch to stop said first shaft and start said second shaft, circuit interrupting means connected into said circuit connections and located adjacent said eccentric to be operated thereby for interrupting each selected circuit after each marking operation of said eccentric, a plurality of contact elements in said circuits corresponding with said marking wheel characters, and a brush rotating with said marking wheel and connected in said circuits for completing a circuit selected by a key operated switch.

5. In a marking machine, a frame having spaced head and base portions providing a gap therebetween, an object supporting platen movably mounted in said gap, a marking wheel over said platen adjacent said head portion, marking characters on said marking wheel, an eccentric below said platen adjacent said base portion, slide block means forming a connection between said eccentric and platen for moving said platen toward said marking wheel to effect a marking operation, a shaft in said head portion connected to said marking wheel, a shaft in said base portion connected to said eccentric, separate clutch means for rotating said shafts, motor means drivingly connected with said clutch means, ratchet ring means on said first shaft, electrically responsive ratchet lever means for engaging

said ratchet ring means to stop said first mentioned shaft and said marking wheel, electrically responsive lever means for actuating said clutch means for said second mentioned clutch means to rotate said second mentioned shaft and eccentric to effect a marking operation, key operated switches for each of said marking wheel characters, circuit connections between each key operated switch and said ratchet lever means and clutch means for stopping said marking wheel in marking position and for rotating said eccentric to move said platen, circuit interrupting means for said circuit connections positioned adjacent said eccentric to be operated thereby for interrupting each circuit at the conclusion of each marking operation, and means connected into said circuits for relating each marking wheel character with a key operated switch including stationary contact elements and a brush rotating with said marking wheel and sweeping said contact elements to complete the selected circuit for effecting a marking operation.

6. In a marking machine, a frame having a body portion and spaced head and base portions projecting therefrom to provide a gap therebetween, rotary shafts in said head and base portions, a marking wheel on said head shaft adjacent said gap, an eccentric on said base shaft adjacent said gap below said marking wheel, an object supporting platen movably mounted on said frame in said gap, slide block means carried by said base portion forming a connection between said eccentric and platen to move said platen toward said marking wheel to effect an object marking operation, a slip clutch and ratchet means on said head shaft, electrically responsive ratchet lever means on said body portion to engage said ratchet means and stop rotation of said head shaft and marking wheel in a selected marking position, normally open clutch means for said base shaft, electrically responsive clutch actuator means on said body portion to actuate and close said normally open clutch means to rotate said base shaft and eccentric, motor means connected with said slip clutch and normally open clutch means for driving both thereof, key operated switches corresponding to the marking wheel characters on said frame adjacent said platen, circuits from said key operated switches to said electrically responsive ratchet lever means and clutch actuator means for energizing both thereof upon closing of a selected key operated switch, contact elements corresponding to said marking wheel characters connected into said circuits, a brush rotating with said marking wheel to sweep said contact elements and complete a circuit through a contact element associated with a selected key operated switch to effect a marking operation, and circuit interrupting switch means adjacent said eccentric and connected into said circuits, said interrupting switch being actuated from said eccentric after completion of each rotation thereof to determine the marking operation of the machine.

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