J. SINISI.

TYPE WRITING MACHINE.

APPLICATION FILED JULY 24, 1907.

924,198.

Patented June 8, 1909.

5 SHEETS—SHEET 1.

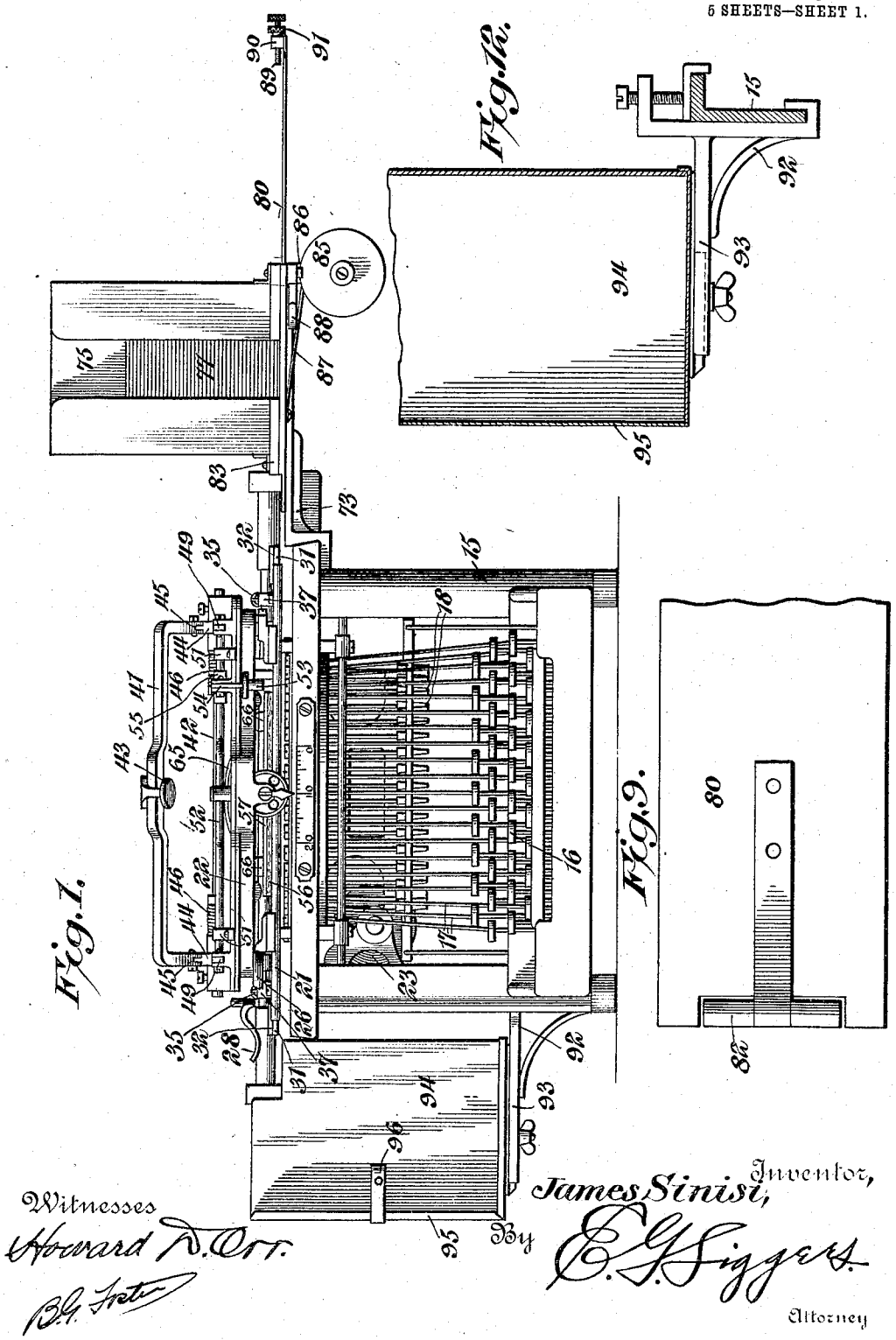


Fig. 1.

Fig. 8.

Fig. 9.

Witnesses

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5 SHEETS—SHEET 2.

Fig. 11.

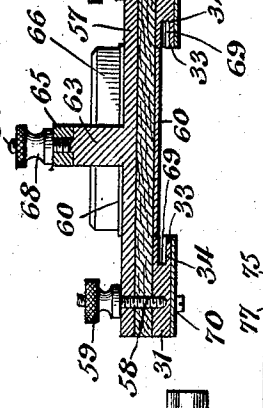


Fig. 10.

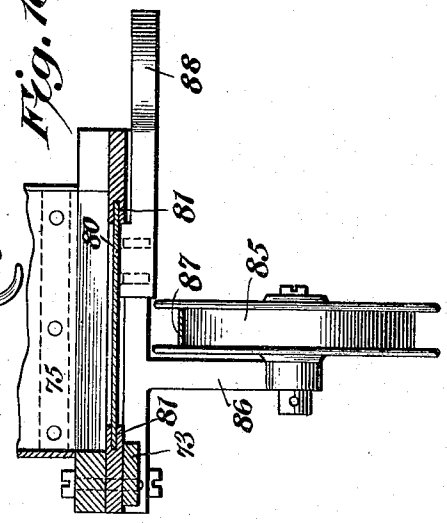
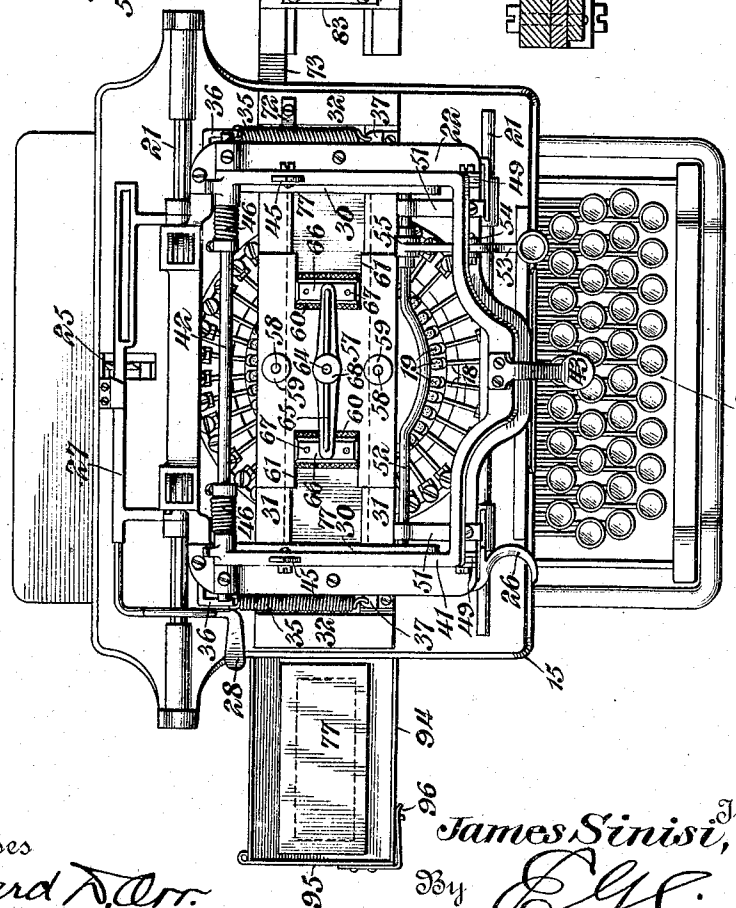


Fig. 2.



Witnesses

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5 SHEETS—SHEET 3.

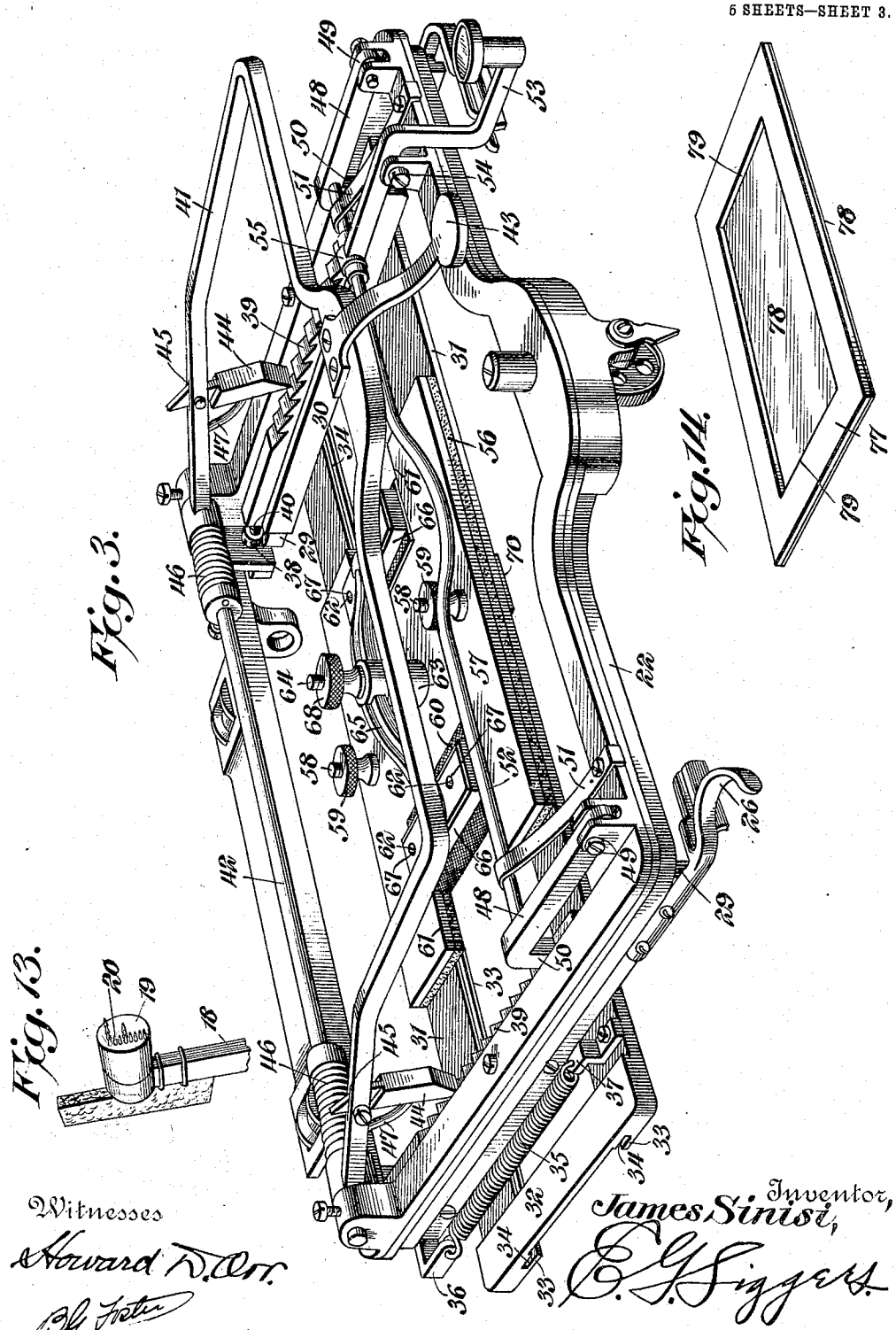


Fig. 3.

Fig. 14.

Fig. 13.

Witnesses

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5 SHEETS—SHEET 4.

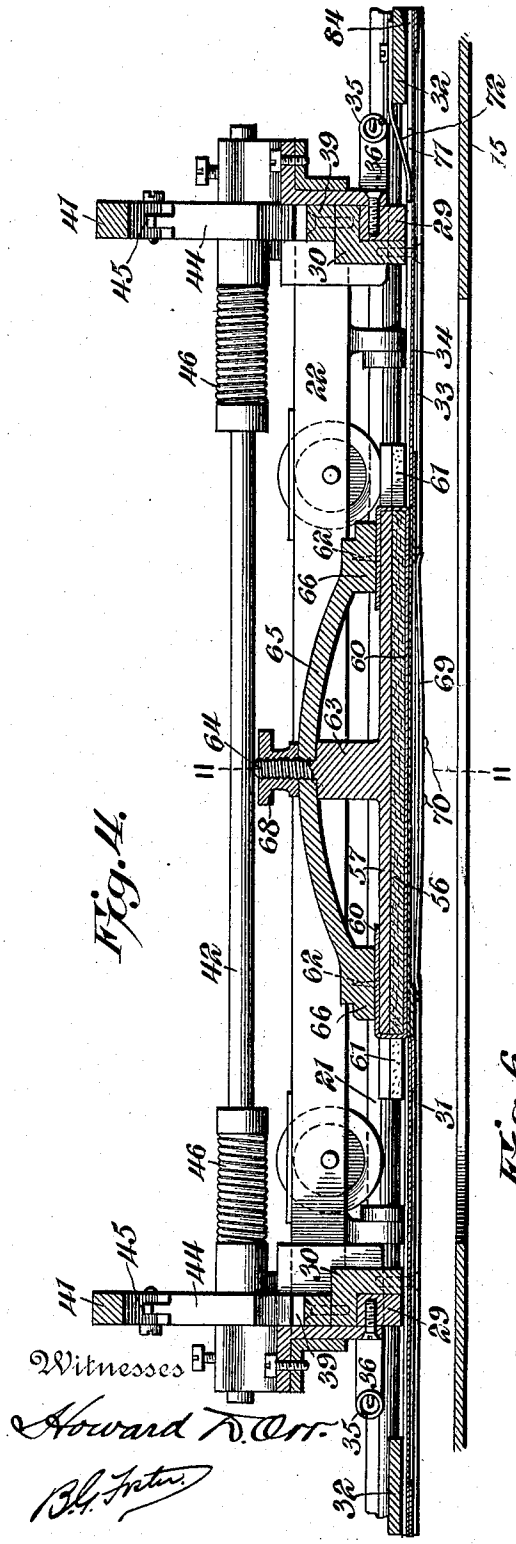


Fig. 4.

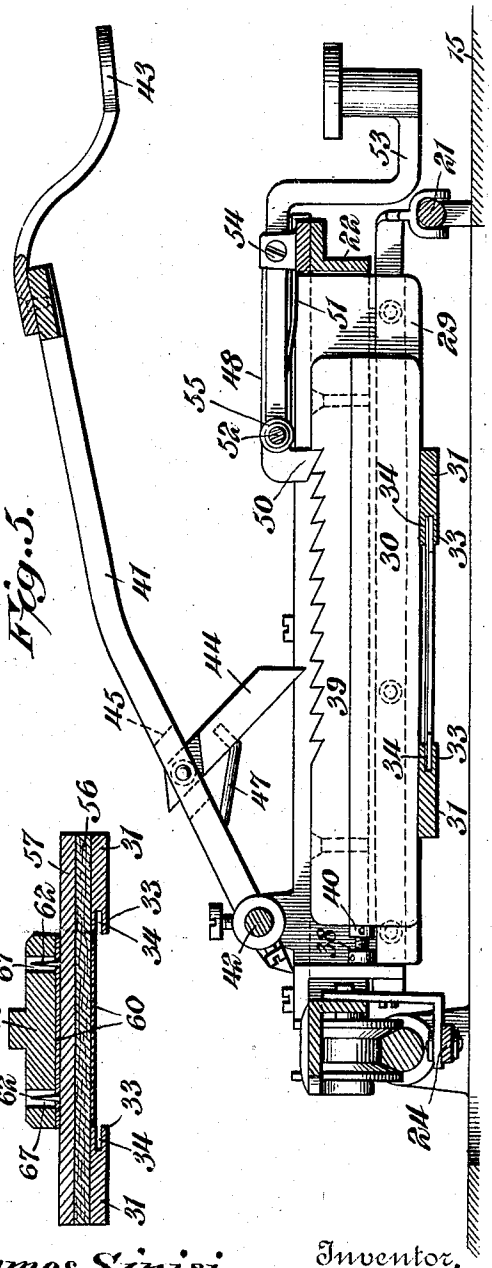


Fig. 5.

Fig. 6.

Witnesses

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5 SHEETS—SHEET 5.

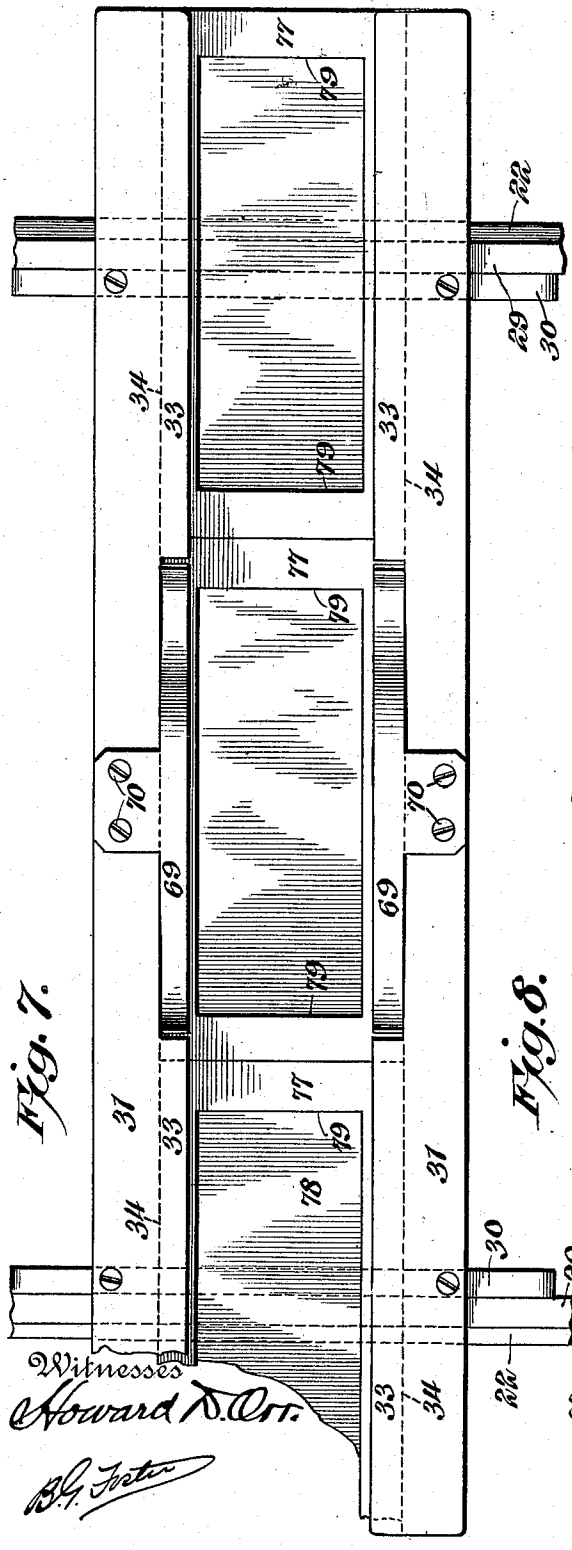


Fig. 7.

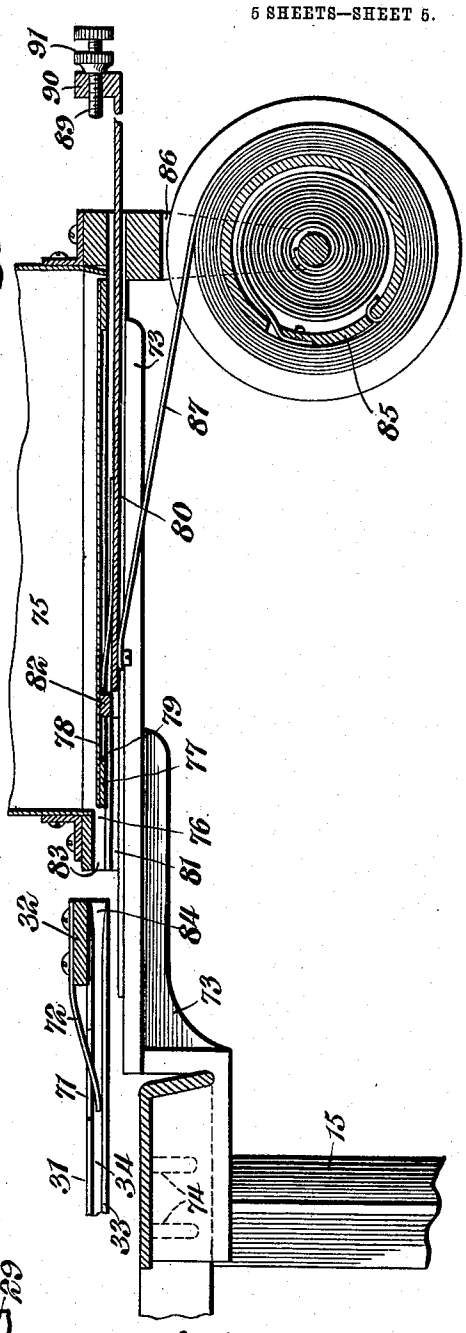


Fig. 8.

Witnesses

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UNITED STATES PATENT OFFICE.

JAMES SINISI, OF NEW YORK, N. Y., ASSIGNOR TO COSMOPOLITAN ADDRESSING COMPANY, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

No. 924,198. Specification of Letters Patent. Patented June 8, 1909.

Application filed July 24, 1907. Serial No. 385,319.

To all whom it may concern:

Be it known that I, JAMES SINISI, a subject of the King of Italy, residing at New York, in the county of New York and State of New York, have invented a new and useful Type-Writing Machine, of which the following is a specification.

This invention relates more particularly to means for producing stencil cards employed in addressing machines, though there are features not necessarily limited to such use.

The primary object of the present invention is to provide novel means of a simple nature which may be rapidly and conveniently operated, and which will properly present the cards to and hold them in position with respect to the printing point of the printing or perforating mechanism.

A further object is to provide a machine, wherein the keys and operating means are on the order of the standard typewriting machine, so that they can be operated by any one having a knowledge of such machines.

A further object is to provide mechanism for feeding cards to the machine, the card holding means coacting with the feeding means so that cards can be successively positioned with respect to the printing point with speed and accuracy.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a front elevation of the machine. Fig. 2 is a top plan view thereof. Fig. 3 is a perspective view of the carriage and associated parts. Fig. 4 is a longitudinal sectional view through said carriage. Fig. 5 is a cross sectional view. Fig. 6 is a detail cross sectional view through the platen and card guides or work holder. Fig. 7 is a bottom plan view of the card guides or work holder. Fig. 8 is a detail sectional view through the feeding means and lower portion of the magazine. Fig. 9 is a top plan view of the feeding plunger. Fig. 10 is a cross sectional view through the feeding means and lower portion of the magazine. Fig. 11 is a detail cross sectional view through the platen and card guides on the line 11—11 of Fig. 4. Fig. 12 is a detail vertical sectional view through the receiving magazine. Fig. 13 is a detail perspective view of one of the type heads. Fig. 14 is a detail perspective view of one of the stencil cards.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, a supporting frame 15 is employed that corresponds substantially to that of the standard machine. It is provided with a standard key-board, the keys of which have link connections 17 with type-bars 18 pivoted in the frame and carrying type heads 19. The type 20 of the heads, as shown particularly in Fig. 13, are formed of a plurality of sharpened points or studs arranged in the form of letters or indicating marks. These type heads swing to a common printing point upon the operation of the keys in a manner well understood to those skilled in the art.

Spaced tracks 21 are located on top of the supporting frame 15, and a reciprocatory carriage 22 operates on said tracks, the carriage being capable of a swinging movement with the rear track as an axis. A spring drum 23 has a belt connection 24 with the carriage for moving it in one direction, and escapement mechanism 25 operated by the keys of the key-board in the usual manner, controls the movement of the carriage under the action of the spring drum. A suitable outstanding grip 26 secured to the front portion of the carriage, constitutes convenient means whereby said carriage can be moved against the action of the spring drum. The escapement mechanism 25 coöperates with a rack 27 pivotally mounted on the carriage and capable of being elevated out of engagement with the escapement mechanism by a finger piece 28.

The carriage 22 is provided at its ends with transverse tracks 29, and a carrier is slidably mounted on these tracks, and is thus capable of movement transversely of the path of movement of said carriage. The carrier consists of shoes 30 that slide upon the tracks 29, and spaced guide bars 31 secured to said shoes, and connected at their ends by cross pieces 32. These guide bars are provided on their opposing edges with card holding flanges 33 forming card-receiving grooves 34 between them. Coiled springs 35, located at the ends of the carriage, have their rear ends secured to ears 36 fastened to said carriage, while their

front ends are attached to ears 37 secured to the carrier. These springs therefore urge the carrier toward the rear side of the carriage, as will be evident. The rearward movement, however, is limited by adjustable stop screws 38 threaded into the rear ends of racks 39 fastened to the carrier transversely thereof. Lock nuts 40, threaded on the screws, serve to hold them against accidental movement. For the purpose of effecting the movement of the carrier in a forward direction, a lever yoke 41 is fulcrumed upon a rod 42 secured to the rear side of the carriage, the front bar of said yoke being provided with a suitable actuating key 43. Dogs 44, pivoted in sockets 45 in the yoke, are movable into and out of coaction with the teeth of the racks 39. Springs 46, secured to the rod 42 and engaged with the yoke 41, serve to hold said yoke elevated, and thus normally maintain the dogs 44 out of coaction with the racks. Stop pins 47 are preferably carried by the rear sides of the dogs 44, and engage against the under side of the yoke 41, said pins serving to maintain the dogs at an inclination, as will be evident particularly by reference to Figs. 3 and 5. In order to maintain the carrier in the different positions to which it is moved by the dogs 44, holding dogs 48 are pivoted, as shown at 49 to the front of the carriage, and have downturned teeth 50 that interlock with the teeth of the racks 39. These dogs are normally held in engagement with said teeth by springs 51 bearing upon a cross rod 52 that connects the dogs. A key lever 53, fulcrumed between its ends, as shown at 54 upon the front side of the carriage, has its rear end engaged, as shown at 55 with the rod 52. Consequently upon the depression of the front end of the key lever, the rod 52 and the dogs 48 will be elevated, thus disengaging their teeth 50 from the racks and releasing the carrier.

A platen is mounted on the intermediate portions of the guide bars 31, and bridges the space between them. This platen consists of a sheet of cushioning material 56, preferably of leather, and a metallic backing plate 57. Studs 58, having their lower ends fastened in the guide bars 31, pass through openings in the cushion 56 and backing plate 57, and project above the latter. Holding nuts 59, threaded upon the upper ends of the studs, serve to hold the cushion and backing plate in position. A protective strip 60 of canvas or other suitable material is located against the under side of the cushion 56 between the guide bars 31, and as shown more particularly in Figs. 4 and 6, the ends of this strip pass upwardly through cut-away portions 61 in the ends of the platen and are engaged over upstanding pins 62 projecting from the upper face of the backing plate 57. A central post 63, rising from the backing plate, has a reduced threaded upper end portion 64, and a yoke 65 detachably located on said end portion, is provided with heads 66 at its ends, said heads having sockets 67 to receive the pins 62, as illustrated in Fig. 6. A nut 68, threaded upon the upper end portion 64 of the post 63, normally holds the yoke 65 in position. It will be observed, particularly by reference to Figs. 4 and 7 that the lowermost guide flanges 33 are cut-away beneath the platen above described, and that bowed leaf springs 69, secured between their ends, as shown at 70, substantially close the grooves, the end portions being pressed upwardly. Furthermore the upper flange of one of the guide bars is cut-away as shown at 71 in Fig. 8, and a spring 72, secured to the adjacent cross bar 32, has its free end passing through the cut-away portion 71 into the groove 34.

A bracket 73, secured to one end of the frame, as shown at 74, supports a work or card holding magazine 75, said magazine having a delivery mouth 76 at its bottom and in one of its side walls at a height corresponding to the height of the card-receiving grooves 34, as illustrated in Fig. 8. The magazine is of a sufficient size to receive a stack of the stencil cards, one of said cards being illustrated in detail in Fig. 14. It will be observed that each card consists of a frame 77, to one side of which is pasted a sheet of parchment paper 78, and thus a flange or shoulder 79 is formed upon one side of said card. These cards are placed in the magazine with the said flanges on the under sides, and a reciprocatory plunger 80 operating in guide-ways 81 at the bottom of the magazine, is provided with a spring supported head 82 arranged to engage against the rear shoulder to force the cards successively from the magazine. Card guides 83 are located in line with the delivery mouth 76 of the magazine, and the adjacent ends of the card receiving grooves 34 are preferably enlarged, as shown at 84. A rotatable spring drum 85, mounted in a bracket 86 that depends from the supporting bracket 73, has a tape connection 87 with the under side of the plunger, and normally serves to hold said plunger in retracted position. Its feeding movement is secured by means of an outstanding trigger or finger piece 88 secured thereto and said feeding movement is limited by a stop screw 89 threaded through an upstanding lug 90 on the rear end of the plunger and arranged to abut against the upper end of the bracket 86. A lock nut 91 serves to prevent accidental movement of the stop screw. Another supporting bracket 92 is fastened upon the opposite side of the supporting frame 15, but upon the lower cross bar thereof, and adjustably mounted on the outstanding arm 93 of said bracket, is a receiving magazine 94, the top of which is open

and disposed adjacent to the other ends of the guide bars 31. This magazine is preferably provided with a hinged door 95, and said door has a latch 96 for normally holding it closed.

The operation of the machine is substantially as follows. When the carrier is in its rearmost position on the carriage and the carriage is located adjacent to the magazine, if the plunger is moved from right to left, the head 82 thereof engaging one of the cards, will force it through the guide-ways 83 into the card-receiving grooves 34 of the guide bars 31. A second reciprocation will move a second card thereinto, and said second card will push the first card to a position directly beneath the flat platen, as shown in Fig. 7. This card is therefore in proper position to be operated upon, and if for instance, it is to hold an address, the name is printed on the first line by operating the keys after the manner of an ordinary typewriter. The key or finger piece 43 is then depressed, whereupon the carrier is moved forward a sufficient distance to space a line, and the operation is repeated until the full address is printed. The operator thereupon depresses the key lever 53, which as already explained disengages the dogs 48 from the rack. Inasmuch as the forward action of the carrier had been against the tension of the springs 35, it will be evident that when the said dogs are disengaged, the springs 35 will react and return the carrier to its rearmost position. The carriage is then moved from left to right until the inlet ends of the card-receiving grooves are in coacting relation to the delivery mouth of the magazine, whereupon another card is fed thereinto. The feeding movements will cause the perforated cards to pass from the opposite end of the carrier, whereupon they will fall into the receiving magazine. It will thus be evident that simple means of a novel nature is provided for perforating cards and the like without bending or in any manner mutilating them. Moreover any one skilled in the use of a standard typewriting machine can prepare the cards with speed and accuracy. Inasmuch as the perforating types are delicate and expensive parts of the machine, the particular construction and arrangement of the elements, particularly the platen are important, inasmuch as said types will not contact with any hard surface, thus assuring their preservation and long life. Moreover, the platen is such that the parts liable to injury from the sharp points of the type heads can be removed and replaced by new ones, and these parts being of cheap material, the cost thereof is insignificant.

From the foregoing, it is thought that the construction, operation, and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. In a typewriting machine, the combination with a reciprocatory carriage, of a reciprocatory platen mounted on the carriage and movable transversely of its path of movement, and spaced card guides located along opposite margins of the platen and movable simultaneously therewith in the direction of line and letter spacing, said guides extending to opposite sides of the carriage, the space between the card guides being unobstructed throughout the length of the same to permit the cards being introduced at one side of the carriage, passed therethrough and discharged from the opposite side.

2. In a typewriting machine, the combination with a reciprocatory carriage having spaced transversely disposed tracks, of a carrier mounted on the tracks and movable longitudinally thereof and transversely of the carriage, said carrier including a platen, and spaced card guides located longitudinally along opposite margins of the platen and movable with said platen, said guides extending transversely of and beyond the tracks of the carriage.

3. In a typewriting machine, the combination with a stationary frame, of a plurality of type-bars pivoted to the frame and having a common printing point, tracks mounted on said frame, a carriage movable upon the tracks, escapement mechanism for effecting a step by step movement of the carriage, a carrier mounted on the frame and movable transversely thereof, manual means for effecting such transverse movement of the carriage, a flat platen mounted on the carrier, and spaced card guides carried by said carrier, said card guides extending along opposite sides of the carrier and beyond the ends thereof.

4. In a typewriting machine, the combination with printing mechanism, of a platen, and a movable support for the platen constituting card holding means.

5. In a typewriting machine, the combination with a movable support comprising spaced guide elements having card guides, of a platen mounted on and supported by the elements and bridging the space between them.

6. In a typewriting machine, the combination with a movable support comprising spaced guide elements having card receiving grooves in their inner sides, of a platen mounted and supported by the elements at one side of the grooves.

7. In a typewriting machine, the combina-

tion with a movable support comprising spaced bars having card holding devices on their opposing portions, of a flat platen secured to and supported by the bars and bridging the space between them.

8. In a typewriting machine, the combination with printing mechanism comprising perforating devices, of a platen coöperating therewith, said platen comprising a backing and receiving the impact of the perforating devices, a protective strip located on the backing, outstanding pins that engage the strip, and retaining means engaging over the pins to hold the strip thereon.

9. In a typewriting machine, the combination with printing mechanism comprising perforating devices, of a platen coöperating therewith, said platen comprising a backing, a protective strip located on the backing, outstanding pins that engage the strip, and a retaining yoke having openings that receive the free ends of the pins.

10. In a typewriting machine, the combination with printing mechanism, of a platen coöperating therewith and having a backing on one side, outstanding retaining pins on the other side, a post located on the side having the pins, a yoke engaged with the post having sockets to receive the free ends of the pins, and retaining means for the yoke engaged with said post.

11. In a typewriting machine, the combination with a stationary frame, of printing devices movably mounted thereon, a carriage movably mounted on the stationary frame, a carrier mounted on the carriage and movable transversely thereof, said carrier including spaced bars having card guiding means thereon, and a platen mounted on the bars.

12. In a typewriting machine, the combination with a stationary frame, of a reciprocatory carriage mounted on the frame, means for effecting a step by step movement of the carriage, a carrier mounted on the carriage and movable transversely thereof, said carrier including spaced bars having card holding grooves in their opposing edges, and a flat platen mounted on the bars and bridging the space between them.

13. In a typewriting machine, the combination with a stationary frame, of a plurality of type-bars pivoted thereto, tracks mounted on said frame, a reciprocatory carriage mounted on the tracks and capable of swinging movement, said carriage having transversely disposed tracks, a carrier comprising spaced bars slidably mounted on the transverse tracks of the carriage, said carrier swinging with the carriage and having a reciprocatory movement therewith, and said spaced bars having card holding means, and a platen secured to the bars and bridging the space between them.

14. In a typewriting machine, the combination with a stationary frame, of type-bars pivoted thereto, tracks mounted on the frame, a reciprocatory carriage mounted on the tracks, transverse tracks carried by the carriage, spaced bars slidably mounted on the carriage tracks and having card holding means, and a platen secured to and supported by the bars.

15. In a typewriting machine, the combination with a stationary frame, of printing mechanism movably mounted thereon, a reciprocatory carriage mounted on the frame, and spaced card guides mounted longitudinally on the carriage and extending to the end thereof, said guides being movable on the carriage transversely of its path of movement.

16. In a typewriting machine, the combination with a stationary frame, of printing mechanism movably mounted thereon, a reciprocatory carriage mounted on the frame, and spaced bars secured at its ends to the ends of the carriage and movable transversely thereof, said bars having card receiving grooves in their opposing edges, and manual means for effecting the transverse movement of the bars.

17. In a typewriting machine, the combination with printing mechanism having a common printing point, of a flat platen work holding means simultaneously movable past said printing point and having reciprocatory movements in angularly disposed directions, means for effecting a step by step movement of the work holding means in one direction, a spring for moving the work holding means in a direction at an angle to the direction of the step by step movement, and key operated means for effecting a step by step movement of the work holding means in an opposite direction against the action of the spring.

18. In a typewriting machine, the combination with printing mechanism, of a supporting member, a work holding member mounted on the supporting member and movable thereon in opposite directions in a single plane, means for effecting a letter spacing movement of the supporting member and work holding members, means for automatically moving the work holding member in one direction with respect to the supporting member, a rack carried by one member, a dog mounted on the other member, and manual means for actuating the dog to move the work holding member against the action of the automatic means.

19. In a typewriting machine, the combination with printing mechanism, of a supporting member capable of letter spacing movement with respect to the printing mechanism, a simultaneously movable flat platen, and work holding member mounted on the supporting member and having a reciprocatory movement thereon, a spring for

automatically moving the work holding member in one direction, a rack carried by the work holding member, a dog pivoted on the supporting member and engaging the rack to effect line spacing movement of the work holding member, and a key connected to the dog for operating the same.

20. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon, a movable carriage mounted on the frame, a carrier mounted on the carriage and movable transversely of its path of movement, card holding means and a platen mounted on the carrier, and key operated means for effecting a step by step movement of the carrier in one direction including a depressible key that operates said means when depressed.

21. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon, a carriage member movably mounted on the frame, a carrier member movably mounted on the carriage member, a platen and card holding means mounted on the carrier member, a dog mounted on one of such members and engaging the other to effect a step by step movement of the carrier member, and a depressible key connected to the dog for operating the same when said key is depressed.

22. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon, a reciprocatory carriage mounted on the frame, a carrier mounted on the carriage and movable transversely of its path of movement, racks mounted on the carrier, a swinging lever yoke pivotally mounted on the carrier, and dogs pivoted to the yoke and engaging the racks.

23. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon and having a common printing point, a movable carriage mounted on the frame, a carrier mounted on the carriage and movable transversely of its path of movement, card holding means, and a platen mounted on the carrier, key operated means for effecting a step by step movement of the carrier in one direction, and automatic means for returning the carrier after such step by step movement.

24. In a typewriting machine, the combination with printing mechanism, of a movable carriage coöperating therewith, a work holder movably mounted on the carriage and movable transversely thereof, key operated means for effecting a step by step movement of the work holder in one direction, and a spring for automatically returning the work holder after its said step by step movement.

25. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon, a carriage member movably mounted on the frame, a carrier member movably mounted on the carriage member, a platen and card holding means mounted on the carrier member, a spring connecting the carrier member and carriage member to move the platen in one direction, and a key operated dog mounted on one of such members and engaging the other to effect a step by step movement of the carrier member.

26. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon, a reciprocatory carriage mounted on the frame, a carrier mounted on the carriage and movable transversely thereof, springs connecting the carriage and carrier to move the latter in one direction, racks mounted on the carrier, a swinging lever yoke pivotally mounted on the carrier and having an actuating key, and dogs pivoted to the yoke and engaging the racks.

27. In a typewriting machine, the combination with printing mechanism of a reciprocatory work holder, a flat platen coacting therewith and movable in angularly disposed directions to effect letter and line spacing thereof, automatic means for moving the work holder against the direction of line spacing, mechanism for moving the work holder against the action of the automatic means, means for holding the work holder against movement by the automatic means, and means for effecting the release of the work holder to permit its movement by said automatic means.

28. In a typewriting machine, the combination with a work holder and a platen having simultaneously reciprocatory movements in angularly disposed directions in a single plane, of means for automatically moving the work holder and platen in one direction, manual means for moving the same against the action of the automatic means, means for holding said work holder and platen against movement by the automatic means, and means for releasing the work holder and platen from said holding means to permit the automatic means to operate the same.

29. In a typewriting machine, the combination with printing mechanism, of a work holder coacting therewith and having reciprocatory movements in angular directions in a single plane for letter and line spacing, a spring and key operated means for reciprocating the work holder opposite to and in the direction of line spacing, the key operated means moving said work holder against the action of the spring, a holding device engaging the work holder to prevent its movement by said spring, and a key for operating the holding device to release the work holder and permit its movement by the spring.

30. In a typewriting machine, the combination with printing mechanism having a common printing point, of tracks located on

opposite sides of the said printing point transversely of the line of movement for letter and word spacing, a reciprocatory work holder slidably mounted on the tracks, a spring for moving the work holder in one direction, a rack carried by the work holder, a key actuated dog engaging the rack to effect a line spacing movement of the work holder against the action of the spring, and a key released holding dog normally engaging the rack for preventing the movement of the holder by the spring.

31. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon and having a common printing point, tracks located on opposite sides of said printing point and having a transverse movement, a reciprocatory carrier slidably mounted on the tracks and having a platen and card guides, racks mounted on the carrier, a swinging lever yoke having an actuating key, dogs pivoted to the yoke and engaging the racks, swinging holding dogs engaging the racks, a release key for operating the holding dogs, and springs connected to the carrier for moving the same when the dogs are released.

32. In a typewriting machine, the combination with printing mechanism, of a reciprocatory carriage mounted thereon, a work holder mounted on the carriage and movable transversely of its path of movement, automatic means for moving the holder in one direction on the carriage, mechanism for moving the work holder against the action of the automatic means, means for holding the work holder against movement by the automatic means, and means for effecting the release of the work holder to permit its said movement by the automatic means.

33. In a typewriting machine, the combination with printing mechanism, of a reciprocatory carriage, a work holder mounted on the carriage and movable transversely of its path of movement, a spring for moving the holder in one direction, key operated mechanism for effecting a step by step movement of the work holder against the action of the spring, and a key released device for holding the work holder against movement by the spring after its step by step movement.

34. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon and having a common printing point, a reciprocatory carriage mounted on the frame, means for effecting a line spacing movement of the carriage, a carrier mounted on the carriage and movable transversely thereof, a platen and work holding means mounted on and movable with the carrier, a spring for moving the carrier in one direction, means for effecting a step by step movement of the carrier against the action of the spring, means for holding the carriage against movement by the spring during said step by step movement, and a key for releasing the holding means to permit the movement of the carriage by the spring.

35. In a typewriting machine, the combination with a stationary frame, of a plurality of type-bars pivoted thereto and having a common printing point, tracks mounted on the said frame, a reciprocatory carriage slidably mounted on the tracks and capable of swinging movement, said carriage being provided with transversely disposed tracks, a carrier slidably mounted on the carriage, tracks including spaced guide bars having card receiving grooves in their inner sides, a flat platen carried by the bars and bridging the space between them, racks located at the ends of the carrier, a swinging lever yoke having dogs that engage the racks, holding dogs engaging the racks, means for disengaging the dogs from the racks, and springs for moving the carrier when the dogs are disengaged.

36. In a typewriting machine, the combination with printing mechanism, of a carriage movable with respect thereto, means for effecting a letter spacing movement of the carriage, a reciprocatory work holder mounted on the carriage and slidable transversely of its path of movement, automatic means for moving the work holder in one direction, manual means for moving the work holder in an opposite direction, a holding device, and means other than said manual means for releasing the holding device and work holder to permit the automatic means to operate said work holder.

37. In a typewriting machine, the combination with printing mechanism, of a carriage movably associated therewith, means for effecting a letter spacing movement of the carriage, a work holder mounted on the carriage and movable transversely of its path of movement, automatic means for moving the work holder in one direction, manual means for moving it in an opposite direction, a holding device, and key operated means mounted on the carriage for actuating the holding device to release the work holder and permit its movement by the automatic means.

38. In a typewriting machine, the combination with printing mechanism, of a carriage movable with respect thereto and including end bars, spaced supporting bars, each having its end portions slidably mounted on the end bars, and a platen mounted against movement on and carried by the supporting bars between the end bars of the carriage.

39. In a typewriting machine, the combination with printing mechanism, of a carriage movable with respect thereto and including end bars, supporting bars having their end portions slidably mounted on the

end bars and having card guiding and holding means, and a platen mounted on the supporting bars between the end bars and bridging the space between said supporting bars.

40. In a typewriting machine, the combination with printing mechanism, of an upwardly swinging carriage having end bars, spaced card guide bars extending longitudinally of the carriage, shoes connecting the guide bars and slidably engaged with the end bars of the carriage, and a platen mounted on and bridging the space between the guide bars.

41. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon, a reciprocatory carriage mounted on the frame, automatic mechanism for effecting letter spacing movement of the carriage, a carrier mounted on the carriage and movable transversely thereof, means movable with the carriage for effecting line spacing movement of the carrier transversely of the path of movement of the carriage, said means including a depressible key and work holding means mounted on the carrier.

42. In a typewriting machine, the combination with printing mechanism, of a work holding magazine, a work holder movable with respect to the magazine and printing mechanism, means for feeding work from the magazine to the holder, and means for effecting the movements of the work holder in angularly disposed paths.

43. In a typewriting machine, the combination with a frame and printing mechanism mounted thereon, of a card magazine located at one end of the frame, feeding means for delivering cards from the bottom of the magazine, said feeding means including a card guide, a reciprocatory carriage movable toward and from the magazine, and card holding means mounted on the carriage and including a card guide having one end located at one end of the carriage and movable into and out of coaction with the card guide of the feeding means.

44. In a typewriting machine, the combination with a frame and printing mechanism mounted thereon, of a card magazine, feeding means for delivering cards from the bottom of the magazine, said feeding means including a card guide, and a reciprocatory plunger that operates in the bottom of the magazine to successively move the cards through said guide, a reciprocatory carriage mounted on the frame and movable toward and from the magazine, and card holding means mounted on the carriage and including a card guide movable into and out of coaction with the card guide of the feeding means.

45. In a typewriting machine, the combination with printing mechanism, of a work holding magazine, a reciprocatory carriage movable toward and from the magazine, a platen mounted on the carriage, and means for feeding cards in a direction longitudinally of the path of movement of the carriage from the magazine to a position between the printing mechanism and the platen.

46. In a typewriting machine, the combination with a frame and printing mechanism mounted thereon, of a magazine stationary with respect to the frame, a reciprocatory carriage mounted on the frame and movable toward and from the magazine, a platen on the carriage movable transversely thereof, card guides located on the carriage and extending alongside the platen, said guides being movable with the platen, and means for feeding cards from the magazine into the card guides.

47. In a typewriting machine, the combination with a stationary frame, of printing mechanism mounted thereon, a reciprocatory carriage located on the frame and having card guides disposed longitudinally of its path of movement, a magazine mounted on the frame, and means for feeding cards from the magazine into the card guides.

48. In a typewriting machine, the combination with a supporting frame, of printing mechanism mounted thereon, a reciprocatory carriage mounted on the frame, a platen mounted on the carriage, card guides on the carriage extending alongside the platen, a magazine secured to one end of the frame and having a lower delivery mouth, means for feeding the cards through said delivery mouth into the card guides, and a receiving magazine mounted on the opposite end of the frame in line with the card guides.

49. In a typewriting machine, the combination with printing mechanism having a printing point, of a work magazine, a work holder movable with respect to the magazine and printing point in angularly disposed directions, said holder being movable in said directions into and out of position to receive the work from the magazine, and means for effecting a step by step movement of the work holder in two directions to vary the position thereof with respect to the printing point to respectively line and letter space said work holder, said movement carrying said holder out of receiving position.

50. In a typewriting machine, the combination with printing mechanism, of a card magazine having card delivery guides, a carriage movable toward and from the magazine, card guides mounted on the carriage and movable transversely thereof into and out of line with the card guides of the magazine, and means for effecting the movement of said guides.

51. In a typewriting machine, the combination with a frame, of printing mechanism mounted thereon, a card holding magazine having a delivery mouth, a re-

ciprocatory carriage mounted on the frame and movable toward and from the magazine, card guides mounted on the carriage and movable transversely thereof into and out of line with the delivery mouth of the magazine, means for positioning the card guide in line with said delivery mouth, and means for feeding cards from the magazine through said mouth and into the guides.

52. In a typewriting machine, the combination with a frame, of printing mechanism mounted thereon and having a common printing point, a magazine located at one end of the frame and having a bottom delivery mouth, card guides associated with the mouth, means for feeding cards through said mouth and guides, a reciprocatory carriage mounted on the frame, a carrier having a reciprocatory movement on the carriage transversely of its path of movement, said carrier including spaced card guides, a platen mounted on the card guides, said card guides being movable into and out of alinement with the delivery mouth and card guides of the magazine upon the transverse movement of the carrier, means for effecting such transverse movement, and automatic means for returning the carrier to aline the card guides thereof with the delivery mouth of the magazine.

53. In a typewriting machine, the combination with a frame, of printing mechanism mounted thereon, a card magazine having a delivery mouth, a reciprocatory carriage mounted on the frame, card guides mounted on the carriage and movable in one direction toward and from the delivery mouth and in another direction into and out of alinement therewith, and a flat platen associated with the card guide.

54. In a typewriting machine, the combination with a frame, of printing mechanism mounted thereon, a card magazine having a delivery mouth, a reciprocatory carriage mounted on the frame, card guides mounted on the carriage and movable in one direction toward and from the delivery mouth and in a different direction into and out of alinement, a flat platen associated with the card guides and movable therewith and means for feeding cards through the mouth into the card guides.

55. In a typewriting machine, the combination with a frame, of printing mechanism mounted thereon, a delivering magazine mounted on one end of the frame, a receiving magazine mounted on the other end of the frame, a reciprocatory carriage mounted on the frame between the magazines, card guides mounted on and reciprocating with the carriage, and means for feeding cards from the delivering magazine into the card guides, said card guides delivering into the receiving magazine.

56. In a typewriting machine, the combination with a supporting frame, of a plurality of pivoted typebars mounted thereon and having a common printing point, a magazine fixed to one end of the frame and having a lower delivery mouth, a receiving magazine fixed to the other end of the frame and having an open top, a reciprocatory carriage mounted on the frame, and operating between the delivery mouth of one magazine and the open top of the other, a carrier mounted on the carriage and movable transversely of the same, said carrier including spaced card guides having receiving ends movable toward and from and into and out of alinement with the delivery mouth of the first mentioned magazine, means for effecting a step by step movement of the carrier to move the card guides out of alinement with the mouth, a spring for automatically returning the carrier to a position to aline the card guides with the delivery mouth, and a reciprocatory plunger operating through the bottom of the first mentioned magazine to feed the cards through such delivery mouth into the card guides.

57. In a typewriting machine, the combination with printing mechanism, of card feeding means, a work holder movable with respect to the printing mechanism and card feeding means, and means for effecting line and word spacing movements of the work holder, said work holder during such letter and word spacing movement remaining in line with the card feeding means.

58. In a typewriting machine, the combination with printing mechanism, of card feeding means, a carriage movable with respect to the printing mechanism and card feeding means, mechanism for effecting letter and word spacing movements of the carriage, and card guides mounted on the carriage and movable therewith, said card guides remaining in line with the card feeding means during the said letter and word spacing movement of the carriage and being movable toward and from said feeding means.

59. In a typewriting machine, the combination with printing mechanism, of a reciprocatory carriage movable thereover, a magazine located at one end of the path of travel of the carriage and having a bottom feed, and card guides disposed longitudinally of the path of travel of the carriage and on a plane with said bottom feed.

60. In a typewriting machine, the combination with printing mechanism, of a work holding magazine, a work holder movable in angularly disposed paths of movement with respect to the magazine and printing mechanism, means for effecting a step by step movement of the work holder in one direction for letter spacing, means for effecting a step by step movement of the work holder in the other direction for line spacing, and means for feeding cards to the work holder

when said work holder is in a predetermined position with respect to the magazine.

61. In a typewriting machine, the combination with printing mechanism, of a work holding magazine, a carriage having a path of movement toward and from the work holding magazine and over the printing mechanism, a flat platen mounted on the carriage and movable thereon into and out of line with the magazine, and means for feeding cards to and holding them between the flat platen and printing mechanism.

62. In a typewriting machine, the combination with a frame, and printing mechanism mounted thereon, of a magazine stationary with respect to the frame, a reciprocatory carriage mounted on the frame, a platen located on the carriage, card holding means mounted on the carriage and movable transversely thereof, and means for feeding cards from the magazine to the holding means, said card holding means being in line with the feeding means when in its rearmost position with respect to the carriage.

63. In a typewriting machine, the combination with a frame, of printing mechanism mounted thereon, a card magazine having a delivery mouth, a reciprocatory carriage mounted on the frame, card holding means and a flat platen mounted on the carriage and movable therewith toward and from the delivery mouth, and in another direction into and out of alinement therewith, means for effecting a step by step movement of the carriage to letter space, means for effecting a step by step movement of the platen and card holding means, and means for feeding cards from the magazine to the holding means.

64. In a typewriting machine, the combination with printing mechanism, of a card magazine, a flat platen movable with respect to the printing mechanism, card guides extending in a plane between the platen and printing mechanism, and means for feeding cards from the magazine to the guides.

65. In a typewriting machine, the combination with printing mechanism, of a reciprocatory carriage movable thereover, a flat platen movable with the carriage, card guides movably mounted on the carriage and movable transversely of its path of movement, said card guides having open ends, and means for successively feeding cards into said guides between the platen and the printing mechanism, said cards automatically discharging from the guides.

66. In a typewriting machine, the combination with printing mechanism, of a reciprocatory carriage coöperating therewith, a flat platen mounted on the carriage, a card guide associated with the platen and having an open receiving end, a stationary magazine having a bottom located on a plane with the card guide, and means for feeding cards from the bottom of the magazine into the open end of the card guide.

67. In a typewriting machine, the combination with a frame, of a reciprocatory carriage mounted thereon, printing mechanism coöperating with the carriage, a flat platen mounted on the carriage, spaced card guides extending longitudinally of the carriage and having open ends at the ends thereof, a magazine having a bottom located on a plane with the guides, means for feeding the cards from said bottom into the guides at one end, and a receiver having an open top below the plane of the other ends of the guides and disposed at the opposite end of the frame to the magazine.

68. In a typewriting machine, the combination with a frame, of a reciprocatory upwardly swinging carriage mounted on the frame, printing mechanism, a flat platen movable with the carriage, spaced guides extending between the platen and printing mechanism and disposed longitudinally of the path of movement of the carriage, said guides extending beyond the ends of the carriage, a magazine located at one end of the frame and having a bottom opening, means for discharging cards from the magazine into the guides at one end, means for effecting a step by step movement of the carriage for letter spacing, and means for effecting a step by step movement of the guides transversely of the carriage for line spacing.

69. In a typewriting machine, the combination with a carriage, of spaced supporting bars secured to the carriage, a platen comprising a backing mounted on and bridging the space between the bars, a cushion secured to one side of the backing, a protective strip extending over the cushion, said strip also extending between the bars and having its ends detachably secured to the rear side of the backing, and printing mechanism comprising a plurality of perforating heads movable into and out of coaction with the platen and having sharp points that embed themselves in the protective strip.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES SINISI.

Witnesses:

H. A. McCANN,

GEO. G. VOLKMAR.