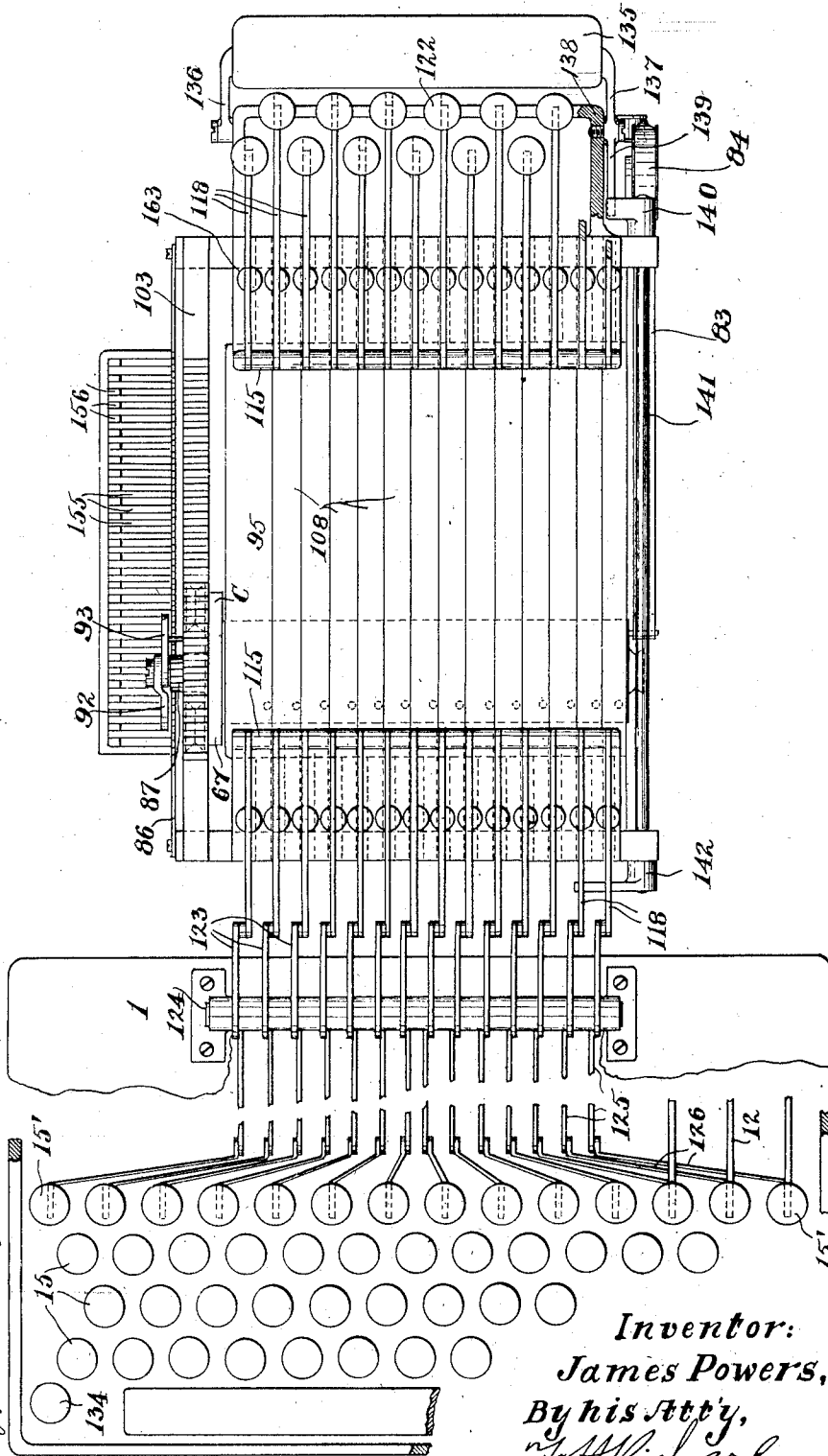


J. POWERS.
 COMBINED PRINTING MECHANISM AND PERFORATING MACHINE.
 APPLICATION FILED AUG. 8, 1914.

1,224,413.

Patented May 1, 1917.
 7 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
 H. Q. Penney.
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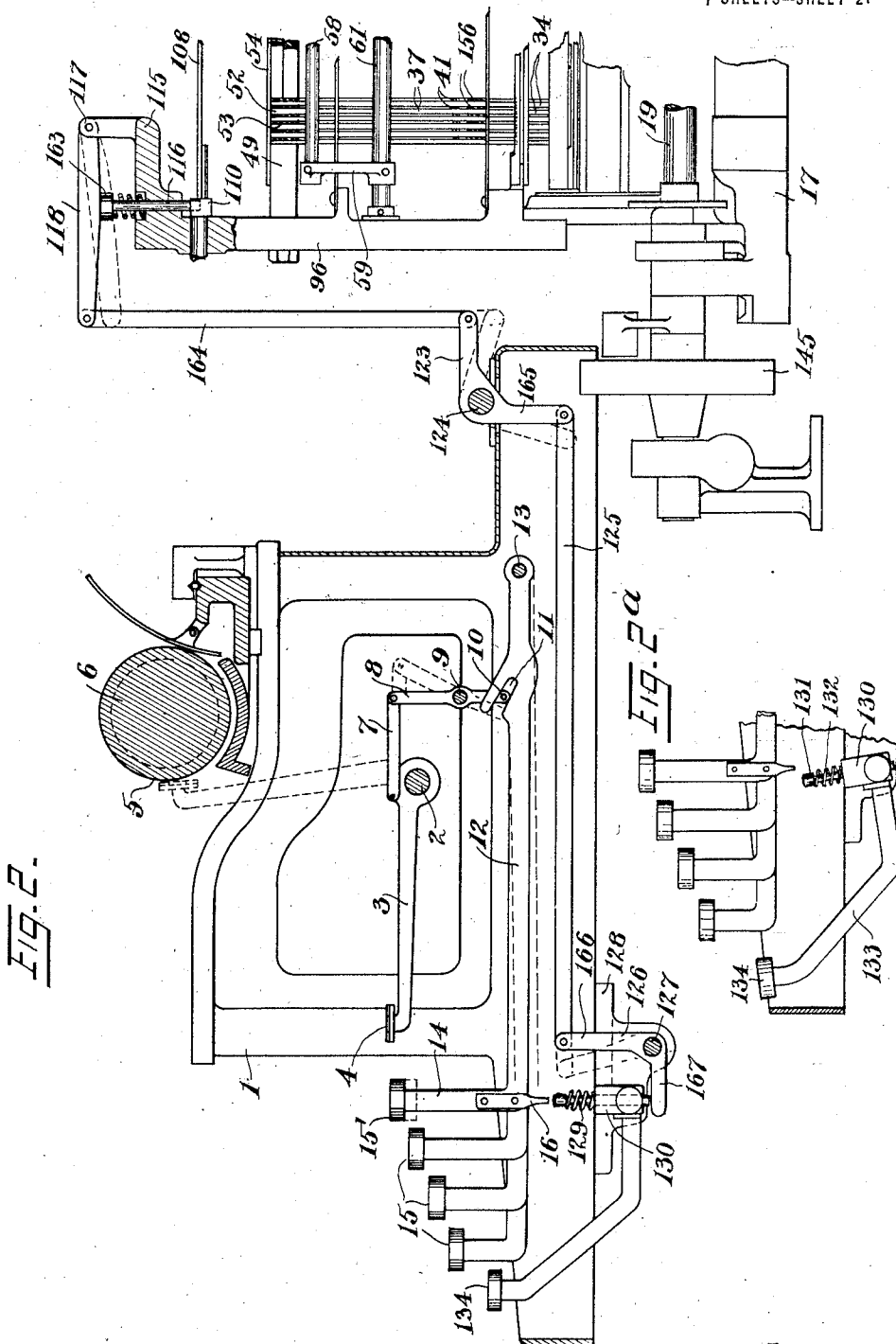
Inventor:
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7 SHEETS—SHEET 2.



Witnesses:

Chas. E. Whitman.
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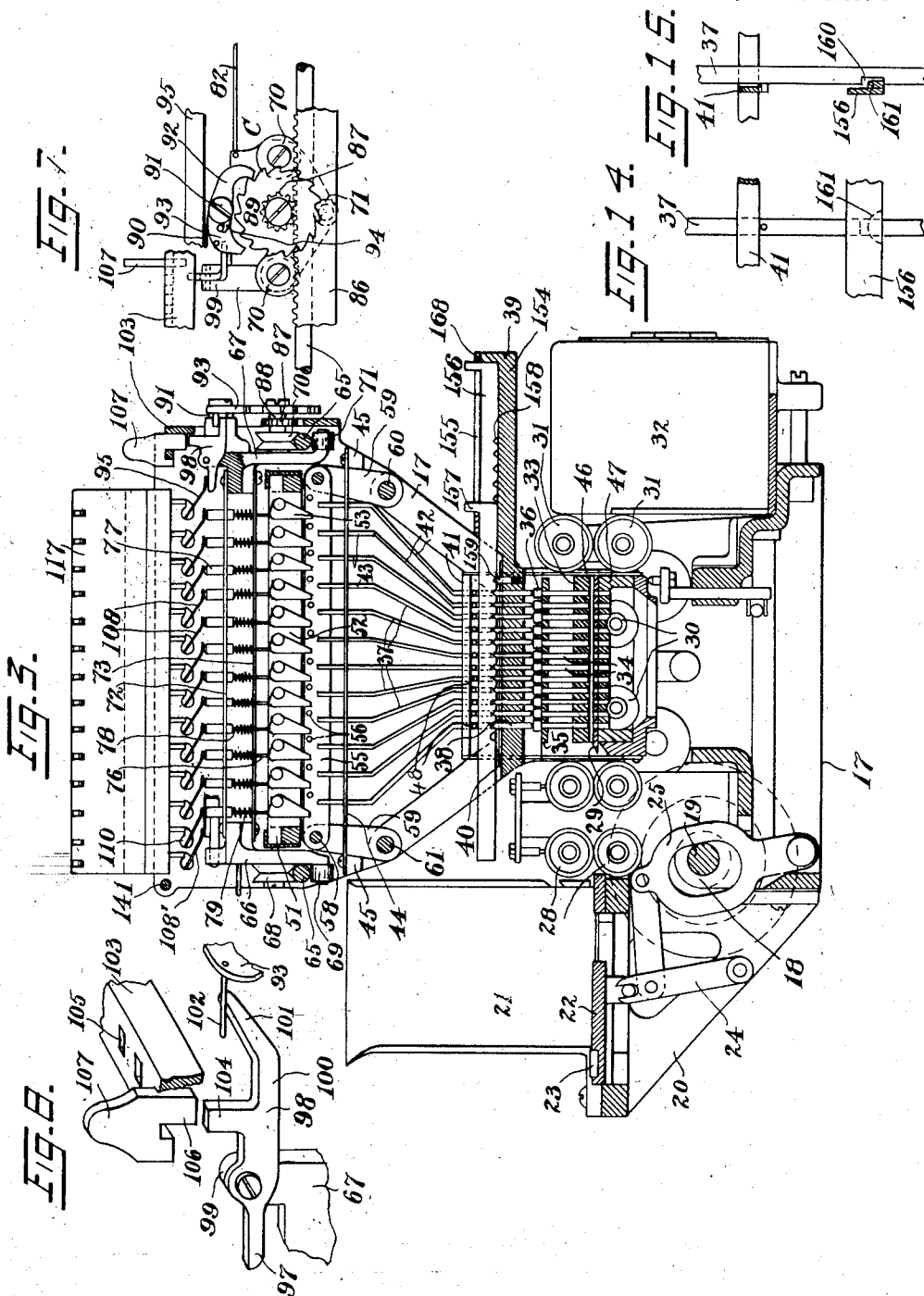
James Powers,
 By his Atty, F. H. Richards.

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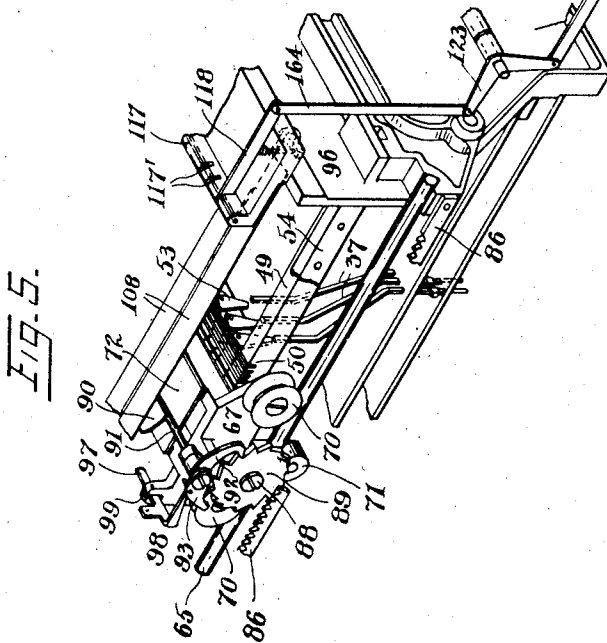
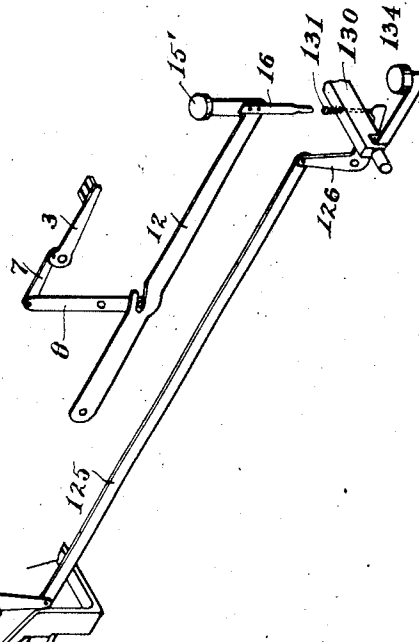
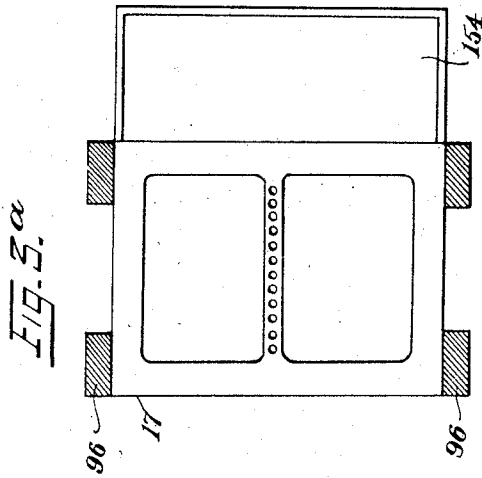
7 SHEETS—SHEET 3.



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1,224,413.

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 7 SHEETS—SHEET 4.



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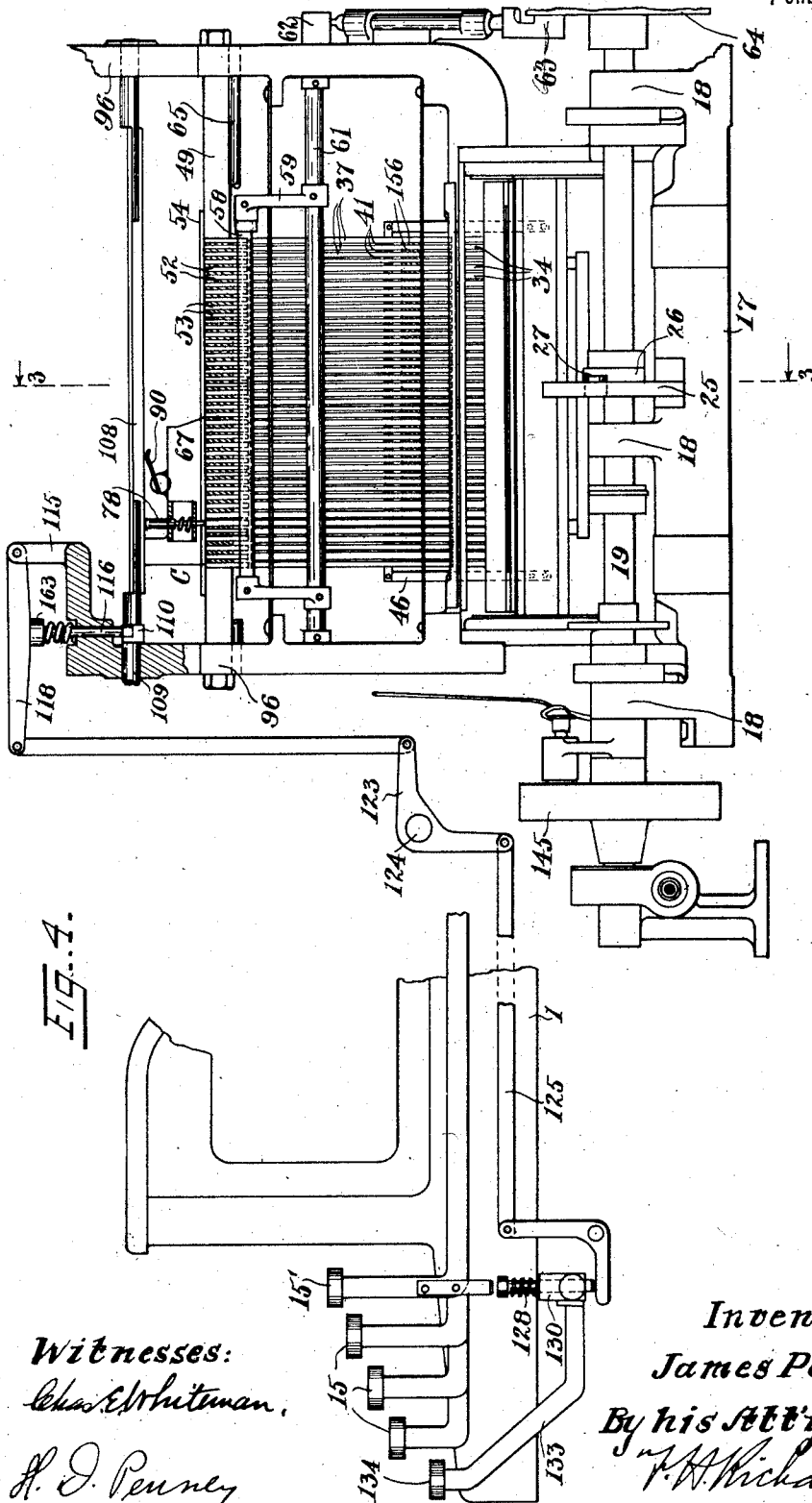
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 COMBINED PRINTING MECHANISM AND PERFORATING MACHINE.
 APPLICATION FILED AUG. 8, 1914.

1,224,413.

Patented May 1, 1917.
 7 SHEETS—SHEET 5.



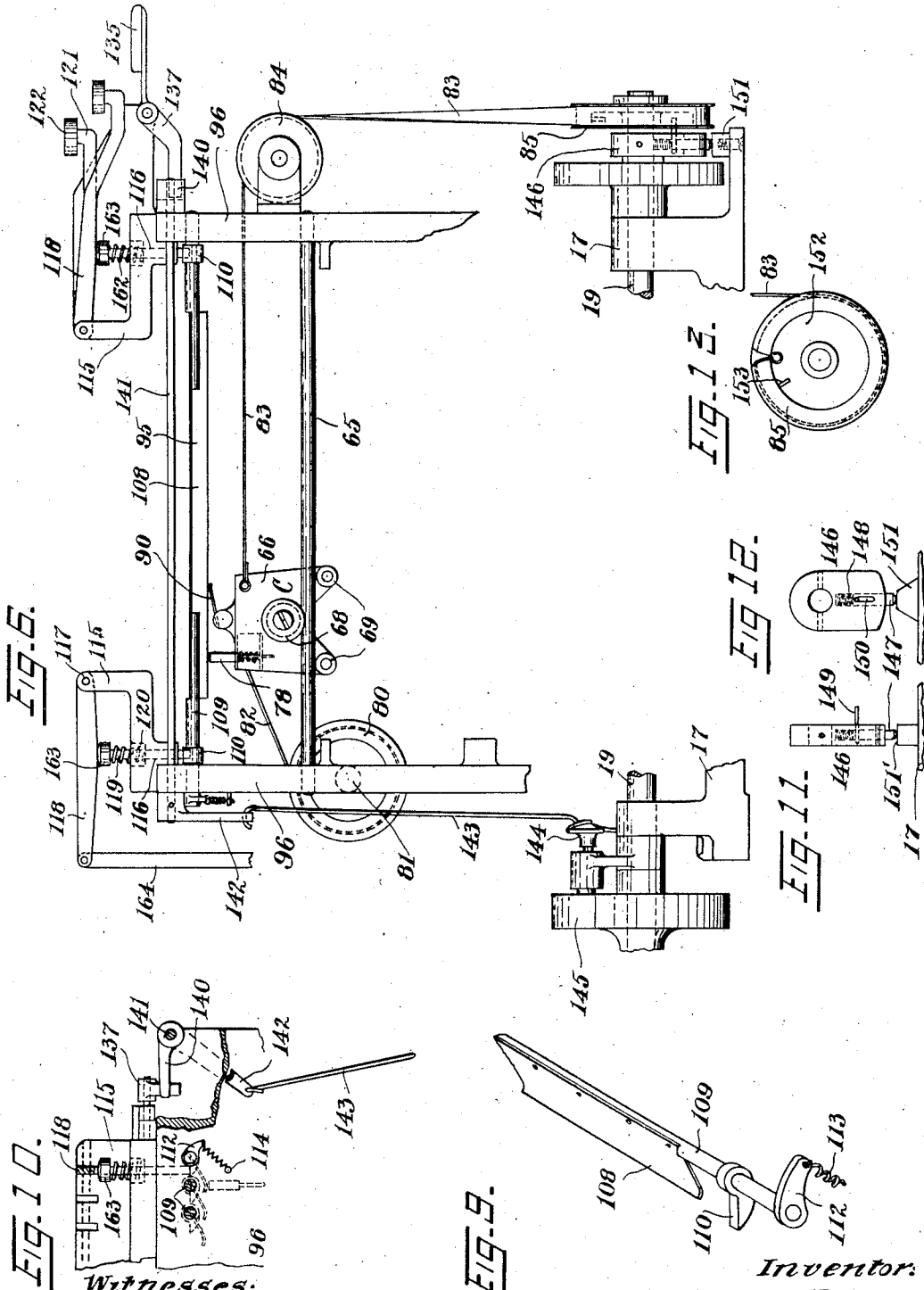
Witnesses:
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 COMBINED PRINTING MECHANISM AND PERFORATING MACHINE.
 APPLICATION FILED AUG. 8, 1914.

1,224,413.

Patented May 1, 1917.
 7 SHEETS—SHEET 6.



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APPLICATION FILED AUG. 8, 1914.

1,224,413.

Patented May 1, 1917.
7 SHEETS—SHEET 7.

FIG. 16.

Abstract of Risks Written.....				Department.....				Per Week Ending.....				October, 1912.....				Relio 337.....			
Policy No.	Name	Location	Agency	State	Character of Risk	Class	Term	Expiration Day Mo Yr	Amount	Rate	Premium	Remarks							
3072379	P.A.M. Co.	SAN FRANCISCO	110 SAN FRANCISCO	Cal.	Stock	62	1 yr.	15 10 13	1,500	1.96	29.40								

FIG. 17.

Policy of Reliance.												Policy of Reliance.											
12	11	10	9	8	7	6	5	4	3	2	1	12	11	10	9	8	7	6	5	4	3	2	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Inventor:

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Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES POWERS, OF NEW YORK, N. Y., ASSIGNOR TO POWERS ACCOUNTING MACHINE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

COMBINED PRINTING MECHANISM AND PERFORATING-MACHINE.

1,224,413.

Specification of Letters Patent.

Patented May 1, 1917.

Application filed August 8, 1914. Serial No. 855,724.

To all whom it may concern:

Be it known that I, JAMES POWERS, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Combined Printing Mechanism and Perforating-Machines, of which the following is a specification.

This invention relates to the general class of recording machines by which records of fire insurance data, traffic data, and the like are produced for filing and for accounting and statistical records.

The main object of this invention is to provide a machine by which, simultaneously with the printing of the record, punches will be selected with corresponding data and maintained in readiness so that cards may be perforated with such data. To this end a machine has been contrived comprising a key mechanism, a printing mechanism, punch selecting mechanism, and connecting mechanism whereby the printing mechanism and punch selecting mechanism are operated by a single manipulation of the key mechanism.

A particular feature of the invention is the novel connecting mechanism which is actuated by the key mechanism to operate the punch selecting mechanism.

To this latter end, it is another object of the invention to provide a movable carriage on which are mounted a row of pin actuating members which are adapted, in position of rest, always to be disposed over a complete row of punches or perforators of which there are a plurality of rows to accommodate cards having various numbers of columns and which carriage is advanced a space for each column selected.

Another object of the invention is to provide a carriage return for such movable carriage whereby to return a carriage after a card is perforated which carriage return is actuated from the main driving means.

A further object of the invention is to provide such a combined printing mechanism and punch selecting mechanism whereby the printing mechanism can be operated singly or in combination, simultaneously, with the selecting mechanism; and whereby the punch selecting mechanism can be operated either singly or in combination, simultaneously, with the printing mechanism.

For this purpose, a common punch selecting mechanism is provided; a main key mechanism which may be constantly connected to the printing mechanism and which can be disconnected from the common punch selecting mechanism at will, so that the printing mechanism can be operated without the common punch selecting mechanism; and an auxiliary key mechanism which may be constantly connected to the common punch selecting mechanism and not connected to the printing mechanism whereby the common punch selecting mechanism can be operated singly without operating the printing mechanism.

Other features of the invention are the novel disconnecting means whereby the connecting means for the punch selectors can be disconnected from the main key mechanism; spacing mechanism for the selecting mechanism whereby the carriage may be advanced a single space without a punch being selected; a carriage release whereby the carriage will be permitted to be advanced the full length of its path of movement without stopping; a stop arrangement which is so adjustable that the carriage when released by the carriage release will come to rest at predetermined points along its path of movement; the retractor for the extension bar mechanism of the perforators; and the gang lock.

These and other features, capabilities and advantages of the invention will appear from the accompanying detailed description of one specific embodiment thereof illustrated in the accompanying drawings in which—

Figure 1 is a plan view of the combined perforating machine and printing mechanism.

Fig. 2 is a side view with part of the perforating machine and other parts broken away.

Fig. 2^a is a side view of part of the keyboard showing the disconnecting means in disconnected position.

Fig. 3 is a section on the line 3—3 of Fig. 4.

Fig. 3^a is a plan of the supporting plate for the gang punch locking plates.

Fig. 4 is a side view similar to Fig. 2 with part of the printing mechanism and other parts broken away.

Fig. 5 is a perspective showing a train of

link and levers connecting a key with a selector.

Fig. 6 is a fragmentary elevation showing two connecting means for two distinct key actions.

Fig. 7 is a fragmentary detached view showing the ratchet and part of the rack bar for controlling the movement of the carriage.

Fig. 8 is a fragmentary detached view of the stop mechanism for the carriage.

Fig. 9 is a fragmentary detached view of one of the lever plates which engage the pins of the perforating machine.

Fig. 10 is a fragmentary view in end elevation showing the connection of the clutch lever.

Figs. 11 and 12 are side elevations respectively of the means for connecting the driving shaft with the pulley for the return of the carriage.

Fig. 13 is a side view of such returning pulley.

Figs. 14 and 15 are fragmentary side and end views illustrating the retracting means and one of the gang punch locking plates.

Fig. 16 is a fragmentary view of a chart printed by said printing mechanism; and

Fig. 17 is a plan of a card adapted to be perforated simultaneously with the printing of the chart illustrated in Fig. 16.

With the apparatus described, the printing mechanism may be of various forms similar to typewriters. In the embodiment shown, (Figs. 1, 2 and 4) there is provided a printing mechanism having a frame 1 in which a shaft 2 is secured on which are movably mounted a series of type bars only one type bar 3 being shown carrying type 4 which is so disposed that when actuated it will be impressed on a paper 5 carried by the roll 6 operatively secured on the frame 1. The type bars 3 each have fixed to them an extension 7 pivotally connected to one end of the lever 8 pivotally mounted on a bar 9 supported by the frame 1. The other end of the lever 8 is provided with a pin or roller 10 adapted to travel in an inclined slot 11 formed in a key lever 12 at one end pivotally mounted on a shaft 13 secured in the frame 1. At the other end this key lever 12 has an upwardly bent portion 14 on the upper end of which is secured a key 15. The keys which are connected to numerals, generally the key 15' in the upper row of the keyboard, are each provided with an extension 16 extending downwardly from the upwardly extending portions 14.

The perforating mechanism, see Fig. 3, is supported in a suitable frame 17 having shaft bearings 18 at its bottom for the driving shaft 19. On one side of the frame is secured a bracket 20 on which is fixedly attached a suitable card receptacle 21 of a size to receive a stock or pile of cards. A

part of the bottom of this receptacle is movable and comprises a sliding member or plate 22 suitably guided at the bottom of the receptacle, and on the bottom of this receptacle including this plate, the cards are placed. The roll of this movable plate is provided with what may be termed a picker 23 the edge of which engages the outer edge of the lowermost card of the pack and forces it forward when the plate is shifted forward toward the perforating mechanism. For shifting this plate backward and forward the underside thereof is connected by a link connection 24 with a slide cam link 25 (Fig. 3), the lower end of which is pivoted to the base, and through the slot of this link a driving shaft 19 passes. On the driving shaft is a cam 26 carrying a roll 27, see Fig. 4, which engages with the inner surface of the elongated slot of the link, and as the shaft rotates it will reciprocate the sliding plate 22 backward and forward. As the plate is shifted toward the perforating mechanism, it will carry the lowermost card with it, and into position to have its forward edge engaged by suitable feed rolls 28, two pair being shown, from which feed rolls 28, the card is passed onto the perforated die plate 29 from which after it has been perforated, it is fed by means of other feed rolls, the two lower rolls 30 of which only being shown, onto the final discharging rolls 31 from which and by which they are discharged into the card receiver 32.

Similar to my prior Patent No. 992,245 there is provided an upper perforated die plate 33 above the die plate 29 the perforations of which plates register with one another to accommodate a series of punches 34 which are normally supported in a punch carrying plate 35 by means of their heads 36. The die plates 29 and 33 are movably mounted to be raised when a card is to be perforated. Above these punches 34 and registering therewith are provided a series of pin extensions 37 which are angular in cross section. The lower portions 38 of the extensions 37, which are in alinement with the punches 34 and pass through a gang punch supporting plate 39 which is integral with the frame 1, are guided in a perforated plate 40 supported above said gang punch supporting plate 39, then pass through perforations in the engaging plate 41 of the retractor above which the extensions are bent at an angle to the lower portions 38 to form the slanting portions 42, which bend is provided to spread the upper portion of the extensions to facilitate the operation of the selecting mechanism mounted in the upper part of the frame. The extensions 37 above the slanting portions 42 continue again into vertical portions 43 which are guided in a perforated plate 44 supported on lugs 45

formed on the frame 17. The engaging plate 41 of the retractor is connected by side members 46 with the supporting brackets 47 on which the lower side plate 29 is supported.

By this connection, the engaging plate 41 will rise and descend with the lower die plate 29 whenever a card has been perforated, and since the portions 38 of the extensions 37 have pins 48 on their sides which are disposed below the engaging plate 41, the extensions 37 will be permitted to rise with the die plate 29 and engaging plate 41 and upon descent of the die plate 29, engaging plate 41 will strike the pins 48 and thereby draw down the extensions 37 and with them the punches 34 registered with such raised extensions 37. The die plates 29 and 33 are raised and lowered as set forth in my prior Patent No. 992,245.

Above the portions 43 of the extensions 37 and to each side of them there is provided a bar 49 having notches 50 therein, to receive the lugs 51 of the switch block supporting bars 52. The bar 49 is fastened to the frame 17 by any suitable means. On one side of the supporting bar 52, there are pivotally secured a series of switch blocks 53 such as described in my patent application, Serial No. 769,558, filed May 24, 1913, the switch blocks being substantially inverted truncated isosceles triangles stamped out of thin plate, pivoted adjacent to one of their basal angles with the pivots directly in the prolongations of the path followed by the corresponding portions 43 of the extensions 37, there being one switch block for each portion 43. Said switch blocks are actuated by key pins and normally hang with the free sides of their bases lying in the paths of movement of said key pins, and with the lower points of said blocks depending below the supporting bars 52 and in line with portions 43 of extensions 37; but when actuated by a key pin, that is depressed by a key pin, then the lower pins of said blocks extend to one side of the paths of movement of said portions 43 to permit them to rise with plates 29 and 33 without being stopped by said blocks 53. On each of said bars 49 and to lock said supporting portions in position, there is secured an angular plate 54, see Figs. 3 and 5.

To return the switch blocks 53 to normal position after having been actuated by key pins, there are provided a series of plates 55 one for each row of switch blocks, each having studs 56 formed on one side of them, one stud for, and adjacent to each switch block. There are two rods 58 to and between which the ends of said plates 55 are pivoted, each of these rods being pivoted to the upper ends of a pair of arms 59, the lower ends of one pair of said arms being pivoted to the rod or shaft 60, and the lower ends of the other pair of said arms being pivoted to the shaft 61, which shafts 60 and 61 are pivotally

mounted in the frame 17, shaft 61 being connected to a lever 62 which has a cam connection 63, see Fig. 4, with the wheel 64 fixed on the shaft 19 and adapted to be driven thereby by which connection the lever 63 is actuated to rock shaft 61 so that the studs 56 of the plates 55 will engage the lower points of the switch blocks 53 to return them to normal position, whereupon the shaft is rocked back again to the position shown in Fig. 3.

For locking a number of pin extensions 37 in position for repeated perforations, gang punch locking plates are provided. The gang punch supporting plate 39 is illustrated in Fig. 3 as provided with a plurality of guide slots in its cover member 168 which extends over its outer platform portion 154 on which platform and in which slots are located, pin extension or gang punch locking plates 156, each having a finger 157 extending upwardly from its outer ends by means of which the plates are moved in and out of locking position. The lower edge of each of the plates 156 is provided with recesses one of which is adapted to be engaged by a spring-pressed pin 159 mounted in the supporting plate 39, a series of such pins being provided, one for each plate. The pin in locking position engages the plate in one of the recesses, to secure the plate in position, see Fig. 3.

The means for locking the pin extensions is as follows: There is a locking plate 156 provided for each row of pin extensions 37. Each of the pin extensions is provided with a recess 160, Fig. 15, on its side adjacent to the locking plate 156 and the locking plate is provided with a raised portion 161. Thus when it is desired to lock a pin extension 37 for repeated perforations, the plate 156, of that row of pin extensions 37 in which is located the desired pin extension, is moved into position so that its raised portion 161 will engage in the recess 160 of that particular pin extension. To facilitate determining how far a plate 156 is to be moved to engage a pin extension, the cover member 168 will be provided with suitable graduations and such graduations numbered to correspond to the pin extensions.

The key pins are carried on a movable carriage which travels across the switch blocks 53 transversely of the supporting bars 52, two rods 65 forming rails being provided, one being mounted in each side of the frame 17 and parallel to one another. The carriage consists of two brackets 66 and 67, each being movably mounted on one of the rails 65, the bracket 66 having a large upper grooved roll 68 to ride on the upper surface of one rail 65 and two lower plane-faced rolls 69 to engage the lower surface of such rail 65 while the bracket 67 has two large upper grooved rolls 70 to ride on the upper

surface of the other rail 65 and one lower plane-faced roll 71 to engage the lower surface of such other rail 65. The brackets are connected to one another by two plates, an upper plate 72 and a lower plate 73, one above the other, the upper plate having a row of perforations and the lower plate a row of perforations which perforations are in alinement with one another to accommodate key pins 76, the heads 77 of which cooperate in the perforations of the upper plate and the diminished lower portions 78 of which cooperate in the perforations of the plate 73. Coil springs 79 normally maintain the pins in raised position, said pins being mounted on the diminished portions 78 of the key pins 77 and abutting against the lower plate 73 and against the lower ends of the heads 77 projecting laterally beyond the diminished portions 78. The number of pins is equal to the number of switch blocks in a single row on one supporting bar 52, the carriage being so movable that at all positions the key pins 76 will be located above and register with a row of switch blocks 53.

The carriage is advanced by means of suitable actuating means such as a spring motor 80 pivotally mounted on a shaft 81 secured to the frame 17, see Fig. 6, the bracket 67 being connected to said spring motor 80 by a tape 82 by means of which the carriage is drawn toward the spring motor 80.

To return the carriage to initial position another actuating means is provided. The bracket 66 is connected by a tape 83, which passes over an idler 84, to a pulley 85 freely mounted on the shaft 19 which pulley when rotated winds up the tape 83 when the shaft 19 is actuated and thereby draws the carriage toward the idler 84 against the tension of spring motor 80.

The pulley is operatively connected to rotate with said shaft 19 when said shaft is set in rotation. This is done by means of the cam member 146 fixed to rotate with said shaft 19, said cam member having a longitudinal slot open at the end thereof to admit a pin 147 which rests on a spring 148 provided in said slot by means of which it is pressed out into extended position. Said pin 147 has a stud 149 secured to one side of it which projects through the slot 150 on the side face of the cam member 146 and is adapted to move to and fro in said slot.

The cam member is so disposed on said shaft 19 that when the shaft 19 approaches its position of rest the pin 147 of said cam member will ride up the inclined member 151, be depressed into the cam member 146 and at position of rest, the outer end of the pin 147 will be located on the top 151' of the inclined member 151. This cam member is disposed adjacent to the pulley 85.

The pulley 85 has a receding face 152 adjacent to said cam member near the outer end of which is formed a projection 153. The pin 147 projects into the receding face 152 and when in extended position, the projection 153 will obstruct its path of movement so that at whatever position the pulley 85 may be, due to the advance of the carriage by spring motor 80, the pin 147 will engage the projection 153 at such position and return the pulley to normal position thereby winding up the tape 83 and returning the carriage to initial position.

Means are provided for normally maintaining said carriage at rest at various points along its path of movement. For this purpose, there is provided adjacent to that rail 65 on which the bracket 67 rides a rack bar 86 with which meshes a gear 87 pivotally mounted on a stub shaft 88 fixed to bracket 67. Fixed to rotate with said gear 87 is secured a ratchet wheel 89, the teeth of which are inclined toward the spring motor 80. Pivotally mounted by and between said brackets 66 and 67 there is provided a plate 90, one end of which is formed into a stub shaft 91 extending over the ratchet wheel 89 and mounted on said shaft are two pawls 92 and 93, pawl 92 being fixed to rock with said plate 90 and pawl 93 being loosely mounted thereon. Pawl 92 is in engagement with said ratchet wheel when said plate 90 is in raised position, pawl 93 normally being in engagement with said ratchet wheel when said plate is depressed. This is due to the fact that pawl 92 has a projection 94 on one of its faces which normally abuts against the lower edge of pawl 93 and maintains it in raised position when pawl 92 is in depressed or ratchet-wheel-engaging position, this stud being, however, so disposed that when pawl 92 is raised, pawl 93 may engage said ratchet wheel. By this arrangement, the carriage will be permitted to advance notch by notch every time the plate 90 is depressed which is done by actuating either the plate 108' or one of the plates 108. When the plate 108' is actuated, the carriage will be advanced without simultaneously selecting a key.

When it is desired to advance the carriage more than one notch at a time or possibly to permit it to travel its full length, both pawls are released. This is done by depressing a plate 95 which is pivotally mounted by and between the wall members 96 which extend up from the frame 17 at either end of the path of movement of said carriage. The plate 95 when depressed engages the free arm 97 of a lever 98 fulcrumed in a bearing 99 extending up from the bracket 67, the other arm 100 of which lever has a finger 101 which engages the lower side of a pin 102 secured on the pawl 93 and raises the same. At the same time

the plate 95 depressed the plate 90 raising pawl 92, thus liberating ratchet wheel 89 and permitting the spring motor to draw the carriage toward it.

5 To stop the carriage at predetermined points along its path of movement when both pawls are released as just described, the stop arrangement illustrated in Figs. 7 and 8 is provided. This stop arrangement consists of an inverted U-shaped channel member 103 disposed substantially above the path of movement of the bracket 67 with its channel directly in the path of movement of the lug 104 extending up from the lever 98. The channel member 103 is provided with openings 105, see Fig. 8, to receive stop finger 106 of a stop clip 107, the stop finger 106, when secured in one of the openings 105, extending into the channel of said channel member and obstructing the path of movement of said lug 104. Thus when the carriage is released to be drawn by said spring motor one of these stop clips 107 is secured in one of the openings 105, and the lug 104 will strike the stop finger 106, when the carriage arrives at such point in its path of movement, and the carriage will there come to stop.

The key pin depressing means will now be described. Above the path of movement of each key pin 76 a plate 108 is provided, a plate for each key pin. These plates are secured on shafts 109, see Fig. 9, which are pivotally secured to and between wall members 96. The plates in operative position, see Fig. 3, rest on the heads 78 of the key pins 79. Near each of the ends of the shafts 109 and adjacent to and inside of the wall members 96 are lugs 110 which are disposed at an angle to said plates 108, and on said shafts and outside of one of the wall members 96 are fixed lugs 112 extending in a direction opposite to that in which the plates 108 and lugs 110 extend, and are connected by springs 113 to pins 114 on the wall member 96. These spring connected lugs 112 return the plates 108 into raised position after they have been depressed.

The plates 108 are adapted to be depressed by link and lever trains which are operatively connected to corresponding keys. There are two sets of these link and lever trains, one being operatively connected to the keys which operate the printing mechanism already described; and the other operatively connected to the keys which actuate the plates 108 singly without operating the printing mechanism. Extending inward of and secured to each wall member 96 is provided a bearing bracket 115, a bracket for and directly above the plates 108, said brackets having openings 116 through them and directly above said plates 108. On the inner end of each of said brackets there is provided an upwardly extending portion

117 in which are formed bearing slots 117' in which are pivotally mounted the links 118 which extend across said bracket 115 and over to a position outwardly of its adjacent wall member 96. Directly below each of said links 118 and in each of said openings 116 is mounted a pin 162 having a head 163 and a coil spring 119 around it which rests at one end in a seat 120 surrounding an opening 116 and at its other end abuts against the head 163 of the pin thus to normally maintain said pin in raised position. These pins when in normal raised position support the links 118 on them. The lower ends of the pins when depressed each engages a plate 108 and depresses the same, the links when depressed actuating said pins to depress such plates.

The key pin depressing means are adapted also to actuate the carriage releasing means so that, every time a pin has been depressed, the carriage releasing means will be engaged to permit the carriage after such pin has been released to move to the succeeding space or notch in a position where a pin in the next row may be depressed. For this purpose, the plate 90 which is operatively connected to raise the pawl 92 is so positioned under the plates 108 that every time a plate 108 is depressed, it will in turn depress the plate 90 and thereby raise the pawl 92.

When the plates 108 are to be actuated without operating the printing mechanism the free arms of the links 118 which extend outwardly of the wall member 96 are bent upwardly to form the arms 121 on which are secured keys 122; see the right of Fig. 6.

When the plates 108 are to be actuated simultaneously with the printing mechanism, the free arms of the links 118 which extend outwardly of the wall 96 are connected by links 164 to the rearwardly extending arms of the bell cranks 123 which are fulcrumed on a shaft 124 mounted at the rear of the frame proper 1 of the printing mechanism (Figs. 1 and 2). The downwardly extending arms 165 of such bell cranks 123 are connected by links 125 to the upwardly extending arms 166 of the bell cranks 126 fulcrumed on shaft 127 mounted on and between brackets 128 secured to the bottom of the front part of the printing frame 1. Above the forwardly extending arms 167 of the cranks 126 is arranged a series of pins 129 slidably mounted in a rock bar 130 pivotally mounted in and between said two brackets 128. These pins 129 have enlarged heads 131 forming shoulders with such pins (Fig. 2). Coil springs 132 are strained between the heads 131 and the rock bar 130 whereby the pins are normally maintained in a raised position, that is with the heads spaced apart from said rock bar. When in operative position each of these

pins has its head disposed below one of the extensions 16 on the key bars 14 and its lower end disposed above a forwardly extending arm of one of said levers 126. In this position, whenever a key 15 in the upper row of the keyboard is depressed, it will engage the pin 128 depressed beneath it which in turn will rock its lever 126 thereby setting into action the thereto connected link and lever train and depress a pin 117 to actuate a plate 108.

When it is desired to disconnect the printing mechanism from the punch selecting mechanism, the rock bar 130 with its pins 129 may be rocked out of engaging position as shown in Fig. 2. For this purpose a suitable lever 133 may be secured to said rock bar and provided with a key 134 so that upon depressing said key 134 the rock bar 130 will be rocked and with it the pins 129, out of operative position. The plate 108' is operatively connected by a similar link and lever train to that which operatively connects the plates 108.

In the present machine as illustrated in Figs. 1 and 6, there are provided two plate actuating means one of which is connected to the keys 122 which actuate the plates singly without actuating the printing mechanism, and the other of which is adapted to be connected to be actuated simultaneously with the printing mechanism.

In the operation of this machine, similar to that disclosed in some of my prior patents, the punches are selected by key mechanism, a card having in the meantime been fed into perforating position and then when all the punches have been selected that are required for the particular record to be perforated on said card, the actuating means are set into operation which raise the plate on which the card is positioned into contact with the punches selected, the punches passing through said card, whereupon the plate carrying said card is again returned to its lower position, the card fed out of the machine, and another card fed into the same. Simultaneously with this return movement those pin extensions are released and returned to normal position which have been connected up only for a single perforation, while those pin extensions which have been connected up for repeated perforations, that is by the gang locking plates 156, will remain in selected position.

In the present instance, for setting the punching mechanism into operation, a plate 135 is provided having levers 136 and 137, lever 136 being pivoted to one side of the bracket 138 which is secured to the frame 96 and extends below and around the keys 122. The other lever 137 is fulcrumed to the other side of the bracket 138 having a free arm 139 which is positioned under a cover 140 extending from one side of a rock bar 141

having a lever 142 at its other end to which is pivotally connected a rod 143 operatively connected to the clutch releasing member 144, which, as in my prior patents is adapted to permit the shaft 19 to be connected to the power wheel 145 whereby said shaft 19 and all the parts operatively connected thereto will then be driven.

The chart illustrated in Fig. 16 is a fragmentary fac-simile of what is termed an "abstract of risks written" which is common to fire insurance companies. Such chart contains a record of fire insurance policies, only one item being shown, which record gives the "policy No.", "name", "location", "agency", "State", "character of risk", "class", "construction", "term", "expiration, (day, mo., yr.)", "amount", "rate", "premium" and "remarks", for each of which is provided a column with the corresponding data and titles at the heads of such columns. This record contains the essential data necessary for the accounting and statistical work of a fire insurance company.

In Fig. 17 there is illustrated a card for recording the data necessary for accounting or statistical records. In this card it will be seen that the second column calls for the "date" which corresponds to the date at the head of the chart, and certain other columns of the card correspond with certain columns of the chart, viz: "Policy or folio No.", "Agency", "State", "Class", "Construction", "Term", "Expiration, (mo. yr.)", "Amount" and "Premium".

By the present machine as explained, the cards can be perforated without actuating the printing mechanism as by operating the keys 122, and the chart printed without actuating the perforating mechanism as by actuating the keys 15 when the key 133 has been depressed to disconnect the perforating mechanism from the printing mechanism.

However, when the keys 15 are operated and the perforating machine is connected to be actuated simultaneously with said printing mechanism, then whenever a numeral key as 15' is depressed, a corresponding key will be selected in the corresponding column of the card.

Since the date of the chart is a constant factor for the entire sheet, the date for the perforating machine may be set up by gang punch locking plates. It will be seen from this card that the zero in the "Mo." subdivision of the second column stands for the tenth month, as October, and that the 2 in the "Yr." subdivision of the second column stands for 1912.

The first column of the chart is "Policy No." which is found in the third column of the card. The next column of the chart calls for "Location" which does not correspond with the "Re. Ins. Co." column, and therefore, the letters of the printing mechanism

can be used to print out this matter as for instance "San Francisco" which will not affect the selecting mechanism. The next two columns "Agency" and "State" may also be set up in the perforating mechanism by gang punch locking plates, or else "Agency" and "State" be designated by ciphers, as for instance, 110 and 5 respectively, and such printed on the chart simultaneously with selecting corresponding numbers on the perforating machine. Since there is no column on the card corresponding to the "Character of risk" column of the chart, the selecting mechanism may be disconnected by the lever 133 and such column printed out independently, then the selecting mechanism again connected, and the columns marked "Class", "Construction", "Term", "Expiration", and "Amount" filled out, again the selecting mechanism disconnected for the "Rate" column of the chart, and again connected up for the "Premium" column.

The filled-in black circles "P" of the card illustrated in Fig. 17 indicate perforations in such column. In the "Reserve premium" column, it will be noted that all the zeros are perforated. This is done when there are no single spacing means to skip spaces without making a perforation.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general scope of the invention.

I claim:

1. In combination with a punch selecting mechanism, a printing mechanism, one key mechanism to simultaneously actuate said selecting mechanism and said printing mechanism, and another key mechanism to singly actuate said selecting mechanism.

2. In a perforating machine, a series of punches, a movably mounted punch selecting mechanism traveling transversely to said series of punches, a key mechanism stationary with respect to said punch selecting mechanism, and connecting means whereby said key mechanism actuates said punch selecting mechanism.

3. In a perforating machine, a plurality of rows of punches, a movably mounted punch selecting mechanism having one row of punch selectors corresponding to any one of the rows of said punches, said selecting mechanism being movably mounted to select any one of said punches, a key mechanism stationary with respect to said punch mechanism, and connecting means whereby said key mechanism actuates said punch selecting mechanism.

4. In a combined printing and perforating machine, a plurality of rows of punches, a movably mounted punch selecting mechanism having one row of punch selectors corresponding to one of the rows of said punches, said selecting mechanism being

movably mounted to select any one of said punches, a printing mechanism, a key mechanism stationary with respect to said punch selecting mechanism and operatively connected to said printing mechanism, and connecting means whereby said key mechanism will simultaneously actuate said printing mechanism and said punch selecting mechanism.

5. In an apparatus of the class described having a perforating mechanism, a frame for said perforating mechanism, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors corresponding to one of the rows of said punches and operatively mounted on said carriage, said carriage being movably mounted so that said selectors can select any one of said punches, a key mechanism stationary with respect to said punch selectors, and connecting means whereby said key mechanism actuates said punch selectors.

6. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors corresponding to one of the rows of said punches and operatively mounted on said carriage, said carriage being movably mounted so that said selectors can select any one of said punches, a key mechanism stationary with respect to said punch selectors, and connecting means whereby said key mechanism actuates said punch selectors.

7. In an apparatus of the class described having a printing mechanism and a perforating mechanism, a punch selecting mechanism mounted to travel transversely of said perforating mechanism, a key mechanism stationary with respect to said punch selecting mechanism and operatively connected to said printing mechanism, and connecting means whereby said punch selecting mechanism and printing mechanism will be simultaneously actuated.

8. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a punch selecting mechanism having one row of punch selectors corresponding to one of the rows of said punches and movably mounted on said frame, said selecting mechanism being movably mounted to select any one of said punches, a key mechanism stationary with respect to said punch selecting mechanism, and connecting means whereby said key mechanism actuates said punch selecting mechanism.

9. In an apparatus of the class described having a printing mechanism and a perforating machine, a frame for said perforating machine, a plurality of rows of punches mounted in said frame, a carriage

movably mounted on said frame, a row of punch selectors corresponding to one of the rows of said punches and operatively mounted on said carriage, said carriage being movably mounted so that said selectors can select any one of said punches, a key mechanism stationary with respect to said punch selectors, connecting means whereby said key mechanism actuates said punch selectors, and disconnecting means to disconnect said connecting means so that said key mechanism will actuate only said printing mechanism.

10. In an apparatus of the class described having a frame, a plurality of rows of punches in said frame, a carriage movably mounted on said frame, a row of punch selectors corresponding to one of the rows of said punches and operatively mounted in said carriage, said carriage being movable so that said selectors can select any one of said punches, actuating means for drawing said carriage in one direction, arresting means for arresting said carriage, and releasing means for releasing said arresting means to permit said actuating means to draw said carriage.

11. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors operatively mounted on said carriage and so positioned that each punch selector will be in position to select one punch from each row, and means for actuating said punch selectors.

12. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors operatively mounted on said carriage and so positioned that the punch selectors will be in a position to select a punch from each row, one punch selector for each punch, a plurality of universal plates pivotally mounted in said frame, each of which is in alinement with a row of punches and above the path of movement of one of the punch selectors so that when said plates are actuated they will actuate the punch selector beneath it, which selector in turn will select the punch over which it is disposed.

13. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors operatively mounted on said carriage and so positioned that the punch selectors will be in position to select a punch from each row, one punch selector for each punch, a plurality of universal plates pivotally mounted in said frame, each of which is in alinement with a row of punches and above the path of movement of one of the

punch selectors so that when said plates are actuated they will actuate the punch selector beneath it, which selector in turn will select the punch over which it is disposed, and means for actuating said plates.

14. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors operatively mounted on said carriage and so positioned that the punch selectors will be in position to select a punch from each row, one punch selector for each punch, a plurality of universal plates pivotally mounted in said frame, each of which is in alinement with a row of punches and above the path of movement of one of the punch selectors so that when said plates are actuated they will actuate the punch selector beneath it, which selector in turn will select the punch over which it is disposed, and key mechanism operatively connected to said plates so as to actuate said plates.

15. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors operatively mounted on said carriage and so positioned that the punch selectors will be in position to select a punch from each row, one punch selector for each punch, a plurality of universal plates pivotally mounted in said frame, each of which is in alinement with a row of punches and above the path of movement of one of the punch selectors so that when said plates are actuated they will actuate the punch selector beneath it, which selector in turn will select the punch over which it is disposed, key mechanism, and connecting means operatively connecting said plates with said key mechanism so that said key mechanism will actuate said plates.

16. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors operatively mounted on said carriage and so positioned that the punch selectors will be in position to select a punch from each row, one punch selector for each punch, a plurality of universal plates pivotally mounted in said frame, each of which is in alinement with a row of punches and below the path of movement of one of the punch selectors so that when said plates are actuated they will actuate the punch selector beneath it, which selector in turn will select the punch over which it is disposed, a plurality of keys one for each plate, and connecting means operatively connecting said keys to said plates, one key for each plate so that said keys may actuate said plates.

17. In a perforating machine having a frame, a plurality of punches mounted in said frame, a punch selecting mechanism movably mounted on said frame so as to select any one of said punches, actuating means for drawing said selecting mechanism in one direction, arresting means whereby said selecting mechanism is arrested in its path of movement, releasing means to release said arresting means to permit said selecting mechanism to be drawn by said actuating means, and returning means whereby said selecting mechanism is returned to position after a card has been perforated.

18. In a perforating machine having a frame, a shaft mounted in said frame, a driven member freely mounted on said shaft, a drum fixed on said shaft, a shaft connecting means for connecting said driven member to rotate said shaft, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of selectors corresponding to one of the rows of said punches and operatively mounted on said carriage, said carriage being movably mounted so that said selectors can select any one of said punches, key mechanism stationary with respect to said selectors, connecting means whereby said key mechanism actuates said selectors, actuating means for drawing said carriage in one direction as the selectors are actuated, arresting means whereby said carriage is arrested in its path of movement, releasing means to release said arresting means to permit said carriage to be drawn by said actuating means, a tape connecting said drum with said carriage, and a controlling means to operate said shaft connecting means to rotate said drum so that said drum may return said carriage when the selectors have finished their work and the card has been perforated.

19. In a perforating machine having a frame, a plurality of punches, a plurality of extension bars, one extension bar disposed above each punch, means for raising said punches and thereby raising said extension bars when a card is to be perforated, and means for lowering said extension bars and thereby said punches after a card has been perforated.

20. In a perforating machine having a frame, a plurality of punches, a plurality of extension bars, one extension bar disposed above each punch, pins formed on said extension bars, returning plates arranged to engage said pins when the extension bars are in raised position, and means for actuating said plates thereby actuating said extension bars and with them the punches.

21. In a perforating machine having a frame, a plurality of punches, a plurality of extension bars, one extension bar disposed

above each punch, stop levers one arranged above each extension bar to be engaged to stop certain extension bars from being raised, means for raising those punches whose extension bars are not stopped by said stop levers and therewith also such extension bars when a card is to be perforated, and means for lowering said raised extension bars and their respective punches after a card has been perforated.

22. In a perforating machine having a frame, a plurality of punches, a plurality of extension bars, one extension bar disposed above each punch, stop levers one arranged above each extension bar to be engaged to stop certain extension bars from being raised, means for raising those punches whose extension bars are not stopped by said stop levers and therewith also such extension bars when a card is to be perforated, pins formed on said extension bars, returning plates arranged to engage the pins of such extension bars that are in raised position, and means for lowering said plates thereby lowering said raised extension bars and with them their respective punches.

23. In a perforating machine having a frame, a plurality of extension bars one extension bar disposed above each punch, stop levers one arranged above each extension bar to be engaged to stop certain extension bars from being raised thereby to lock those punches which are to perforate, means for raising all of the punches whose extension bars are not locked by said stop levers and to permit the other punches to perforate a card, means for removing said stop levers out of stopping position when a card has been perforated, and means for locking certain of said extension bars and therewith their punches in lowered perforating position which means may remain in locking position to perforate a number of cards at the will of the operator without repeated manipulation.

24. In a perforating machine having a frame, a plurality of punches mounted in said frame, a plurality of extension bars, one extension bar disposed above each punch, locking means for locking certain of said punches in perforating position, and means for raising those punches and their respective extension bars, which are not locked, out of perforating position.

25. In a perforating machine having a frame, a plurality of punches mounted in said frame, a plurality of extension bars one extension bar disposed above each punch, single perforation locking means for locking certain of said punches in perforating position for a single perforation, repeated perforation locking means for locking certain of said punches in perforating position for repeated perforations, and means for raising those punches and their respective

extension bars which are not locked out of perforating position.

26. In a perforating machine having a frame, a plurality of punches mounted in said frame, a plurality of extension bars, one extension bar disposed above each punch, locking means for locking of said punches in perforating position, means for raising those punches and their respective extension bars, which are not locked, out of perforating position, said locking means comprising recesses formed in said extension bars, and plates having raised portions corresponding to said recesses, said plates being movable between said extension bars so that the raised portions engage the recesses of those extension bars which control those punches that are to perforate.

27. In a perforating machine having a frame, a plurality of punches mounted in said frame, a plurality of extension bars one extension bar disposed above each punch, single perforation locking means for locking certain of said punches in perforating position for a single perforation, repeated perforation locking means for locking certain of said punches in perforating position for repeated perforations, means for raising those punches and their respective extension bars which are not locked out of perforating position, said repeated perforation locking means comprising recesses formed in said extension bars, and plates being movable between said extension bars so that the raised portions engage the recesses which control the punches in locking position for repeated perforations.

28. In a perforating machine having a frame, a carriage movably mounted on said frame, punch selectors mounted on said carriage, key mechanism for said punch selectors, a plurality of rows of punches mounted in said frame below the path of movement of said selectors, a plurality of stops corresponding to said punches positioned above said punches and below said selectors in position to be engaged by said selectors, actuating means for drawing said carriage in one direction, arresting means for arresting said carriage above a row of punches, and spacing means for releasing said row of punches to permit said carriage to be drawn to a succeeding row of punches whenever a punch is selected.

29. In a perforating machine having a frame, a carriage movably mounted on said frame, punch selectors mounted on said carriage, key mechanism for said punch selectors, a plurality of rows of punches mounted in said frame below the path of movement of said selectors, a plurality of stops corresponding to said punches positioned above said punches and below said selectors in position to be engaged by said selectors, actuating means for drawing said carriage in one

direction, arresting means for arresting said carriage above a row of punches, and spacing means for releasing said row of punches to permit said carriage to be drawn to a succeeding row of punches whenever a punch is selected, and skipping means for releasing said arresting means to permit said carriage to be drawn to the end of its path of movement.

30. In a perforating machine having a frame, a carriage movably mounted on said frame, punch selectors mounted on said carriage, key mechanism for said punch selectors, a plurality of rows of punches mounted in said frame below the path of movement of said selectors, a plurality of stops corresponding to said punches positioned above said punches and below said selectors, in position to be engaged by said selectors, actuating means for drawing said carriage in one direction, arresting means for arresting said carriage above a row of punches, skipping means for releasing said arresting means to permit said carriage to be drawn to the end of its path of movement, and adjustable stop mechanism which can be set to stop said carriage at predetermined points along its path of movement whenever said arresting means is released by said skipping means.

31. In a perforating machine having a frame, a carriage movably mounted on said frame, punch selectors mounted on said carriage, key mechanism for said punch selectors, a plurality of rows of punches mounted in said frame below the path of movement of said selectors, a plurality of stops corresponding to said punches positioned above said punches and below said selectors in position to be engaged by said selectors, actuating means for drawing said carriage in one direction, arresting means for arresting said carriage above a row of punches, spacing means for releasing said row of punches to permit said carriage to be drawn to a succeeding row of punches whenever a punch is selected, and skipping means for releasing said arresting means to permit said carriage to be drawn to the end of its path of movement, and adjustable stop mechanism which can be set to stop said carriage at predetermined points along its path of movement whenever said arresting means is released by said skipping means.

32. In a perforating machine having a frame, a shaft mounted in said frame, a driven member freely mounted on said shaft, a drum fixed on said shaft, a shaft connecting means for connecting said driven member to rotate said shaft, a carriage movably mounted on said frame, punch selectors mounted on said carriage, key mechanism, connecting means for operatively connecting said key mechanism with said punch selectors, a plurality of rows of punches mounted

in said frame below the path of movement of said selectors, a plurality of stops corresponding to said punches positioned above said punches and below said selectors in position to be engaged by said selectors, actuating means for drawing said carriage in one direction, arresting means for arresting said carriage above a row of punches, spacing means for releasing said arresting means to permit said carriage to be drawn to succeeding rows of punches whenever a punch is selected, a tape connecting said drum with said carriage, and controlling means to operate said shaft connecting means to rotate said drum so that said drum may return said carriage with the selectors after finishing their work and the card has been perforated.

33. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors operatively mounted on said carriage and so positioned that the punch selectors will be in position to select a punch from each row, one punch selector for each punch, a plurality of universal plates pivotally mounted in said frame, each of which is in alinement with a row of punches and below the path of movement of one of the punch selectors so that when said plates are actuated they will actuate the punch selector beneath it, which selector in turn will select the punch over which it is disposed, a plurality of keys one for each plate, connecting means operatively connecting said keys to said plates, one key for each plate so that said keys may actuate said plates, actuating means for drawing said carriage in one direction, arresting means for arresting said carriage above a row of punches, and a releasing plate pivotally mounted in said frame and positioned to be engaged by said universal plates whenever a plate is actuated by one of said keys, said releasing plate releasing said arresting means when engaged by said universal plates thereby to permit said carriage to be drawn to a succeeding row of punches.

34. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors operatively mounted on said carriage and so positioned that the punch selectors will be in position to select a punch from each row, one punch selector for each punch, and a plurality of universal plates pivotally mounted in said frame, each of which is in alinement with a row of punches and below the path of movement of one of the punch selectors so that when said plates are actuated they will actuate the punch selector beneath it, which selector in turn will select the punch over which it is disposed.

35. In a perforating machine having a frame, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors operatively mounted on said carriage and so positioned that the punch selectors will be in position to select a punch from each row, one punch selector for each punch, a plurality of universal plates pivotally mounted in said frame, each of which is in alinement with a row of punches and below the path of movement of one of the punch selectors so that when said plates are actuated they will actuate the punch selector beneath it, which selector in turn will select the punch over which it is disposed, actuating means for drawing said carriage in one direction, arresting means for arresting said carriage above a row of punches, and a releasing plate pivotally mounted in said frame and positioned to be engaged by said universal plates whenever they are actuated, said releasing plate releasing said arresting means when engaged by said universal plates thereby to permit said carriage to be drawn to a succeeding row of punches.

36. In a perforating machine having a frame, a carriage movably mounted on said frame, punch selectors mounted on said carriage, key mechanism, connecting means for operatively connecting said key mechanism with said punch selectors, a plurality of rows of punches mounted in said frame below the path of movement of said selectors, a plurality of stops corresponding to said punches positioned above said punches and below said selectors in position to be engaged by said selectors, actuating means for drawing said carriage in one direction, arresting means for arresting said carriage above a row of punches, said arresting means comprising a rack fixed on said frame, a star wheel rotatively mounted on said carriage and in mesh with said rack, two pawls fixed on said carriage, one in engagement with the star wheel to the exclusion of the other and controlling said star wheel to arrest said carriage, and spacing means for releasing said one pawl and permit the other pawl to engage the star wheel thereby to permit the carriage to be drawn to a succeeding row of punches and there arrested.

37. In a perforating machine having a frame, a carriage movably mounted on said frame, punch selectors mounted on said carriage, key mechanism, connecting means for operatively connecting said key mechanism with said punch selectors, a plurality of rows of punches mounted in said frame below the path of movement of said selectors, a plurality of stops corresponding to said punches positioned above said punches and below said selectors in position to be engaged by said selectors, actuating means for drawing said carriage in one direction, ar-

resting means for arresting said carriage above a row of punches, said arresting means comprising a rack fixed on said frame, a star wheel rotatably mounted on said carriage and in mesh with said rack, two pawls fixed on said carriage, one in engagement with said star wheel to the exclusion of the other and controlling said star wheel to arrest said carriage, and a releasing plate pivotally mounted in said frame and positioned to be engaged by said universal plates whenever they are actuated, said releasing plate operatively connected to release said one pawl and permit the other pawl to engage the star wheel thereby to permit the carriage to be drawn to a succeeding row of punches and there arrested.

38. In a perforating machine having a frame, a carriage movably mounted on said frame, punch selectors mounted on said carriage, key mechanism, connecting means for operatively connecting said key mechanism with said punch selectors, a plurality of rows of punches mounted in said frame below the path of movement of said selectors, a plurality of stops corresponding to said punches positioned above said punches and below said selectors in position to be engaged by said selectors, actuating means for drawing said carriage in one direction, arresting means for arresting said carriage above a row of punches, said arresting means comprising a rack fixed on said frame, a star wheel rotatably mounted on said carriage and in mesh with said rack, two pawls fixed on said carriage, one in engagement with said star wheel to the exclusion of the other and controlling said star wheel to arrest said carriage, and skipping means for releasing both of said pawls to permit the actuating means to draw the carriage to the end of its path of movement.

39. In a perforating machine having a frame, a carriage movably mounted on said frame, punch selectors mounted on said carriage, key mechanism, connecting means for operatively connecting said key mechanism with said punch selectors, a plurality of rows of punches mounted in said frame below the path of movement of said selectors, a plurality of stops corresponding to said punches positioned above said punches and below said selectors in position to be engaged by said selectors, a spring motor mounted in said frame, a tape connecting such carriage to said spring motor thereby to draw said carriage in one direction, arresting means for arresting said carriage above the row of punches, and spacing means for releasing said arresting means to permit said carriage to be drawn to a succeeding row of punches whenever a punch has been selected.

40. A combined printing and perforating

machine comprising a printing mechanism, punch selectors for said perforating machine, a plurality of keys operatively connected to said printing mechanism, connecting means whereby said keys will actuate said punch selectors, said connecting means operatively connecting each key with a punch selector and comprising a rock bar, pins mounted in said rock bar and spring pressed to remain in raised position to be engaged by said keys, a pin for each key, levers operatively connected with said selectors and having one of their arms extending below said rock bar, said levers actuating the selectors connected thereto when operated, the lower ends of said pins protruding through said rock bar and each one extending over one of said levers and in position to actuate its adjacent lever when depressed by a key.

41. A combined printing and perforating machine comprising a printing mechanism, punch selectors for said perforating machine, a plurality of keys operatively connected to said printing mechanism, connecting means whereby said keys will actuate said punch selectors, said connecting means operatively connecting each key with a punch selector and comprising a rock bar, pins mounted in said rock bar and spring pressed to remain in raised position to be engaged by said keys, a pin for each key, levers operatively connected with said selectors and having one of their arms extending below said rock bar, said levers actuating the selectors connected thereto when operated, the lower ends of said pins protruding through said rock bar, each one extending over one of said levers and in position to actuate its adjacent lever when depressed by a key, and disconnecting means for locking said pins out of operative position.

42. A combined printing and perforating machine comprising a printing mechanism, punch selectors for said perforating machine, a plurality of keys operatively connected to said printing mechanism, connecting means whereby said keys will actuate said punch selectors, said connecting means operatively connecting each key with a punch selector and comprising a rock bar, pins mounted in said rock bar and spring pressed to remain in raised position to be engaged by said keys, a pin for each key, levers operatively connected with said selectors and having one of their arms extending below said rock bar, said levers actuating the selectors connected thereto when operated, the lower ends of said pins protruding through said rock bar and each one extending over one of said levers and in position to actuate its adjacent lever when depressed by a key, and a controlling lever fixed to said rock bar whereby said rock bar can be rocked out of operative position.

43. A combined printing and perforating machine comprising a printing mechanism, punch selectors for said perforating machine, a plurality of keys, key bars connected to said keys, extensions on the forward ends of said key bars, connecting means whereby said keys will actuate said punch selectors, said connecting means operatively connecting each key with a punch selector and comprising a rock bar, pins mounted in said rock bar and spring pressed to remain in raised position to be engaged by said key extensions, levers operatively connected with said selectors and having one of their arms extending below said rock bar, said levers actuating the selectors connected thereto when operated, the lower ends of said pins protruding through said rock bar and each one extending over one of said levers in position to actuate its adjacent lever when depressed by an extension.

44. A combined printing and perforating machine comprising a printing mechanism, punch selectors for said perforating machine, a plurality of keys, key bars connected to said keys, extensions on the forward ends of said key bars, connecting means whereby said keys will actuate said punch selectors, said connecting means connecting each key with a punch selector and comprising a rock bar, pins mounted in said rock bar and spring pressed to remain in raised position to be engaged by said key extensions, levers operatively connected with said selectors and having one of their arms extending below said rock bar, said levers actuating the selectors connected thereto when operated, the lower ends of said pins protruding through said rock bar and each one extending over one of said levers in position to actuate its adjacent lever when depressed by an extension, and disconnecting means for locking said pins out of operative position.

45. A combined printing and perforating machine comprising a printing mechanism, punch selectors for said perforating machine, a plurality of keys, key bars connected to said keys, extensions on the forward ends of said key bars, connecting means whereby said keys will actuate said punch selectors, said connecting means operatively connecting each key with a punch selector and comprising a rock bar, pins mounted in said rock bar and spring pressed to remain in raised position to be engaged

by said key extensions, levers operatively connected with said selectors and having one of their arms extending below said rock bar, said levers actuating the selectors connected thereto when operated, the lower ends of said pins protruding through said rock bar and each one extending over one of said levers in position to actuate its adjacent lever when depressed by an extension, and the controlling lever fixed to said rock bar whereby said rock bar can be rocked out of operative position.

46. A combined printing and perforating machine comprising a printing mechanism, punch selectors for said perforating machine, a plurality of keys operatively connected to said printing mechanism, connecting means whereby said keys will actuate said punch selectors, said connecting means operatively connecting each key with a punch selector and comprising a rock bar and normally in raised position to be engaged by said keys, a pin for each key, levers operatively connected with said selectors and having one of their arms extending below said rock bar, said levers actuating the selectors connected thereto when operated, the lower ends of said pins protruding through said rock bar and each one extending over one of said levers and in position to actuate its adjacent lever when depressed by a key.

47. A combined printing and perforating machine comprising a printing mechanism, punch selectors for said perforating machine, a plurality of keys operatively connected to said printing mechanism, actuating means for each selector, connecting means whereby each of said keys is connected to one of said actuating means, said actuating means comprising a universal plate rockably mounted over a selector, a lever pivotally mounted on said frame and operatively connected to said connecting means, pins movably mounted in said frame, each one positioned between a lever and a universal plate to be actuated by said lever, said plate being positioned to be actuated by said pin when said pin is actuated by said lever which plate in turn will actuate a selector.

JAMES POWERS.

Witnesses:

BENJAMIN B. AVERY,
GUSTAV DREWS.