No. 754,155. PATENTED MAR. 8, 1904.

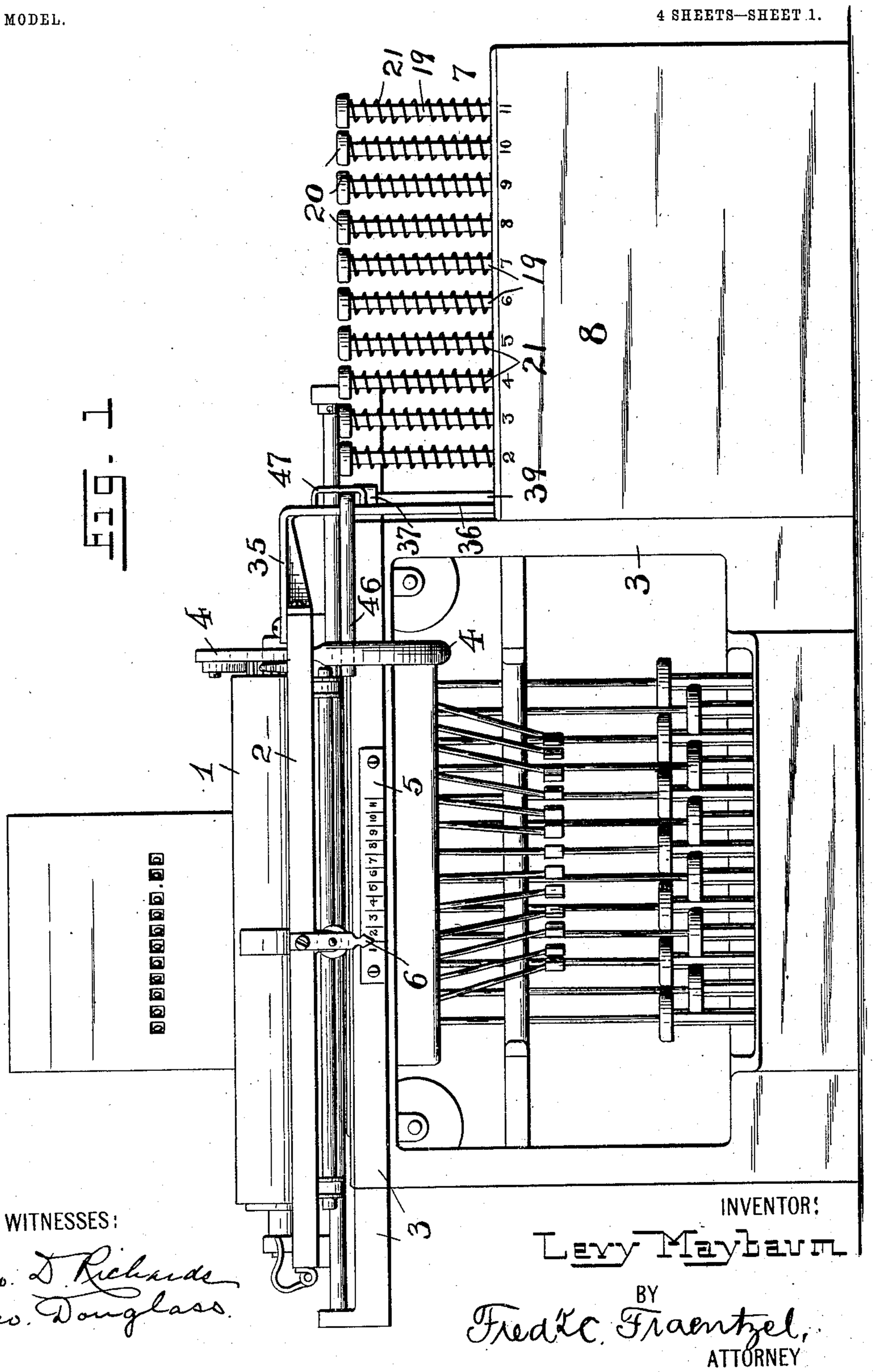
L. MAYBAUM.

CARRIAGE SPACING ATTACHMENT FOR WRITING MACHINES.

APPLICATION FILED APR. 8, 1903.

NO MODEL. 4 SHEETS—SHEET 1.

Fig. 1



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NO MODEL. 4 SHEETS—SHEET 2.

Fig. 2

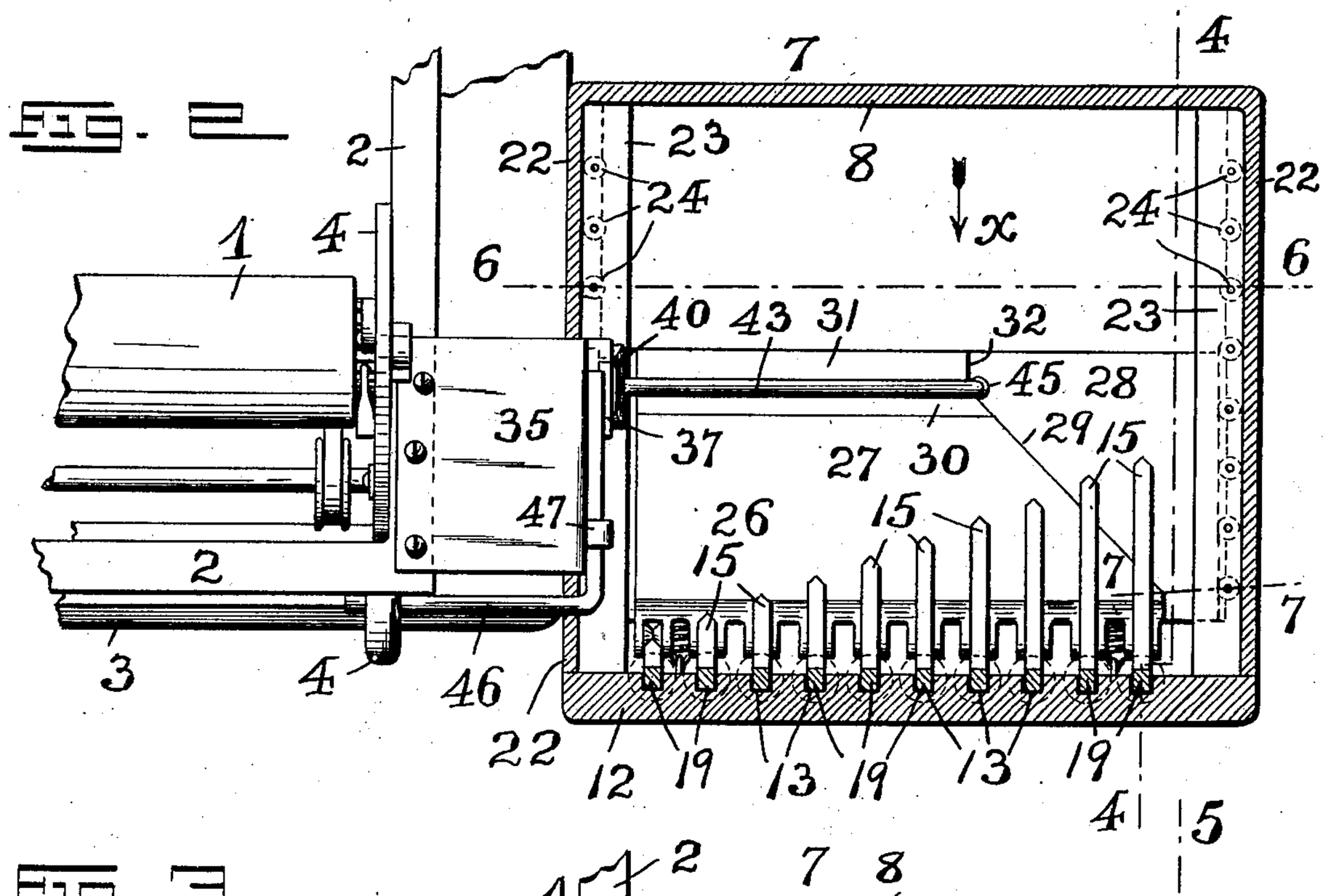
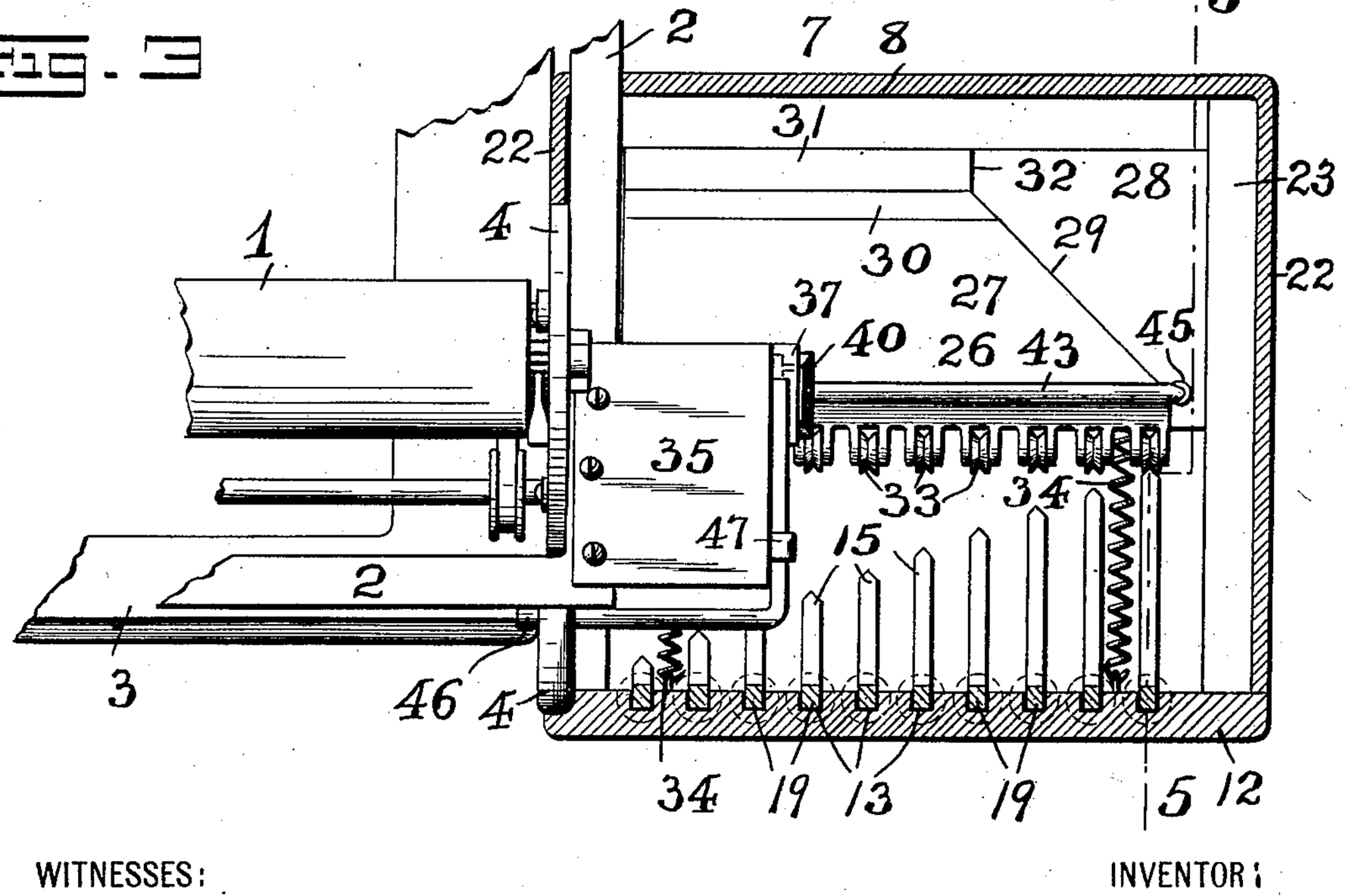


Fig. 3



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NO MODEL. 4 SHEETS—SHEET 3.

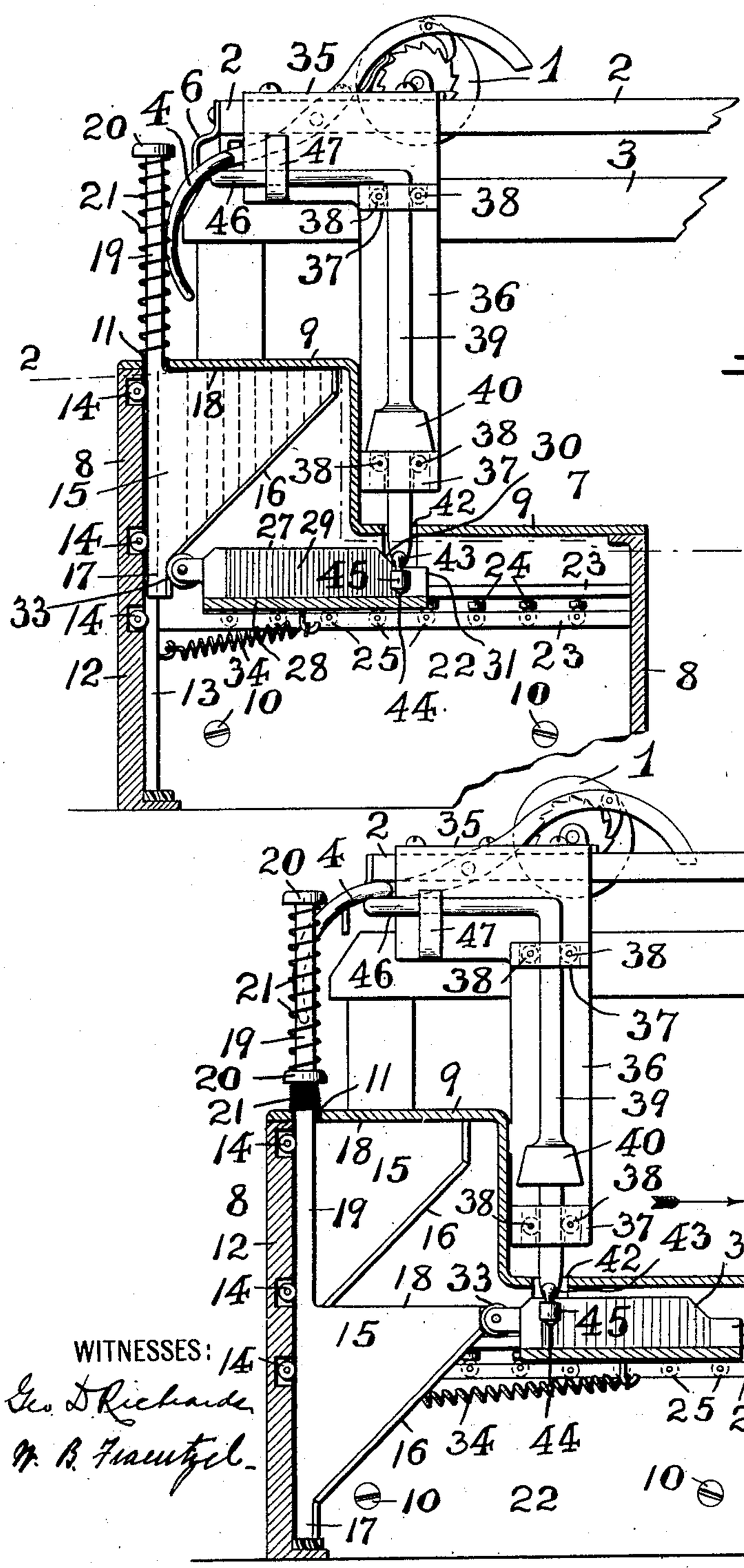

FIG. 4

FIG. 5

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NO MODEL. 4 SHEETS—SHEET 4.

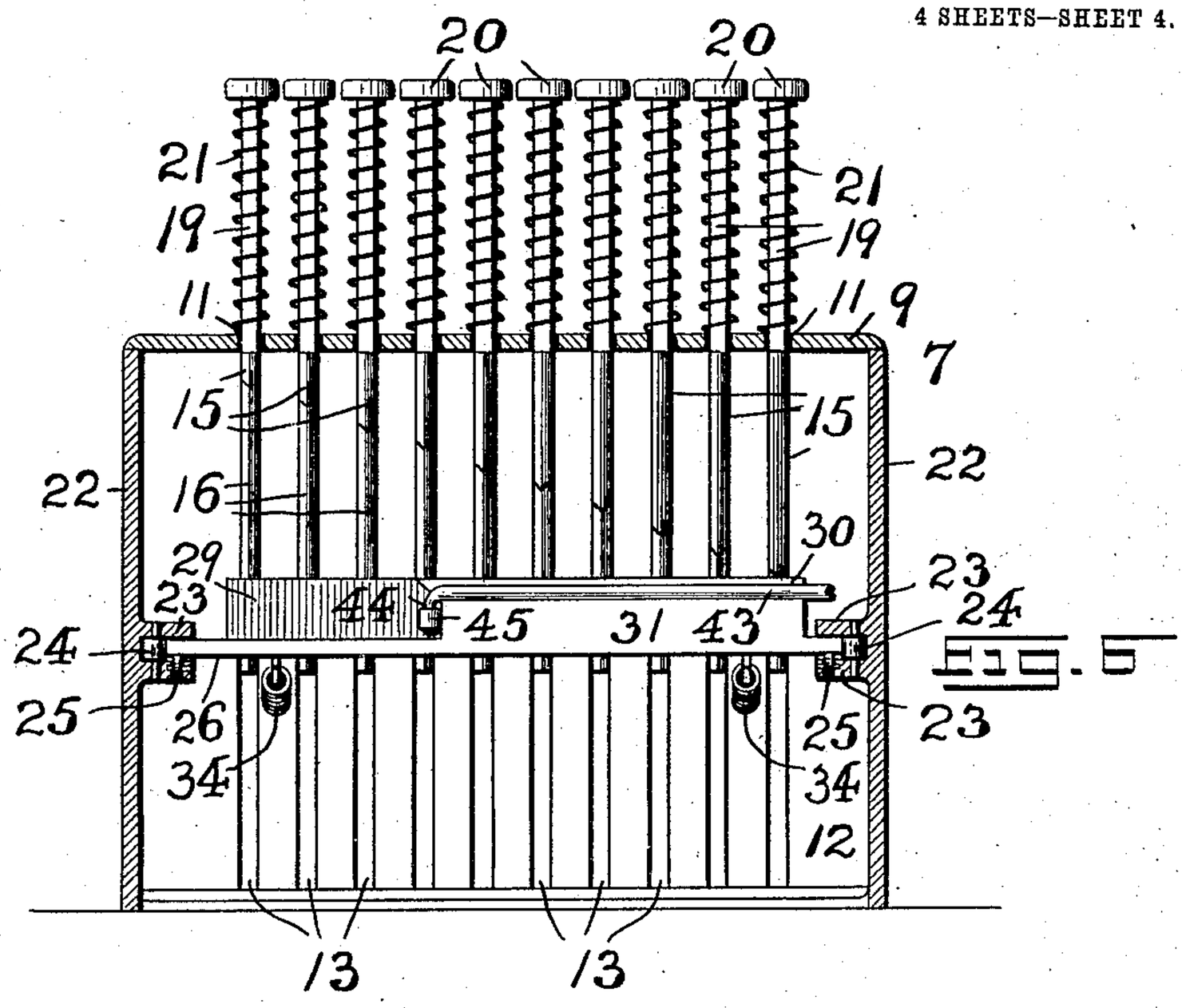

Fig. 5.

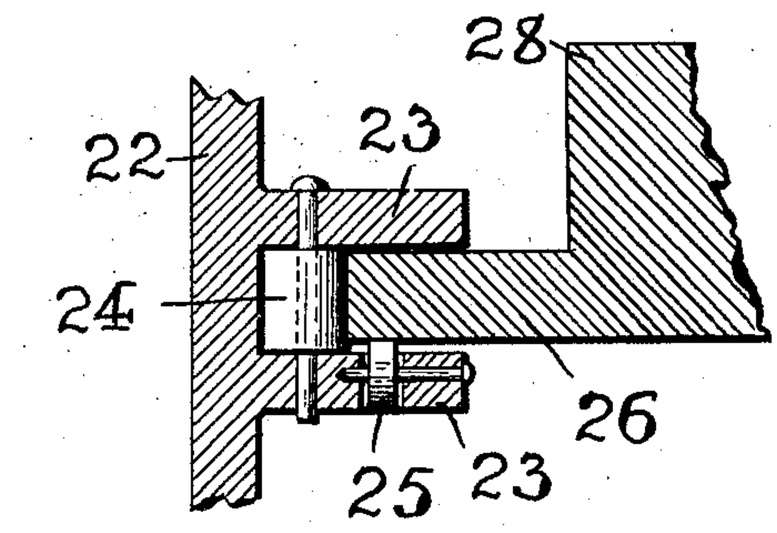

Fig. 7.

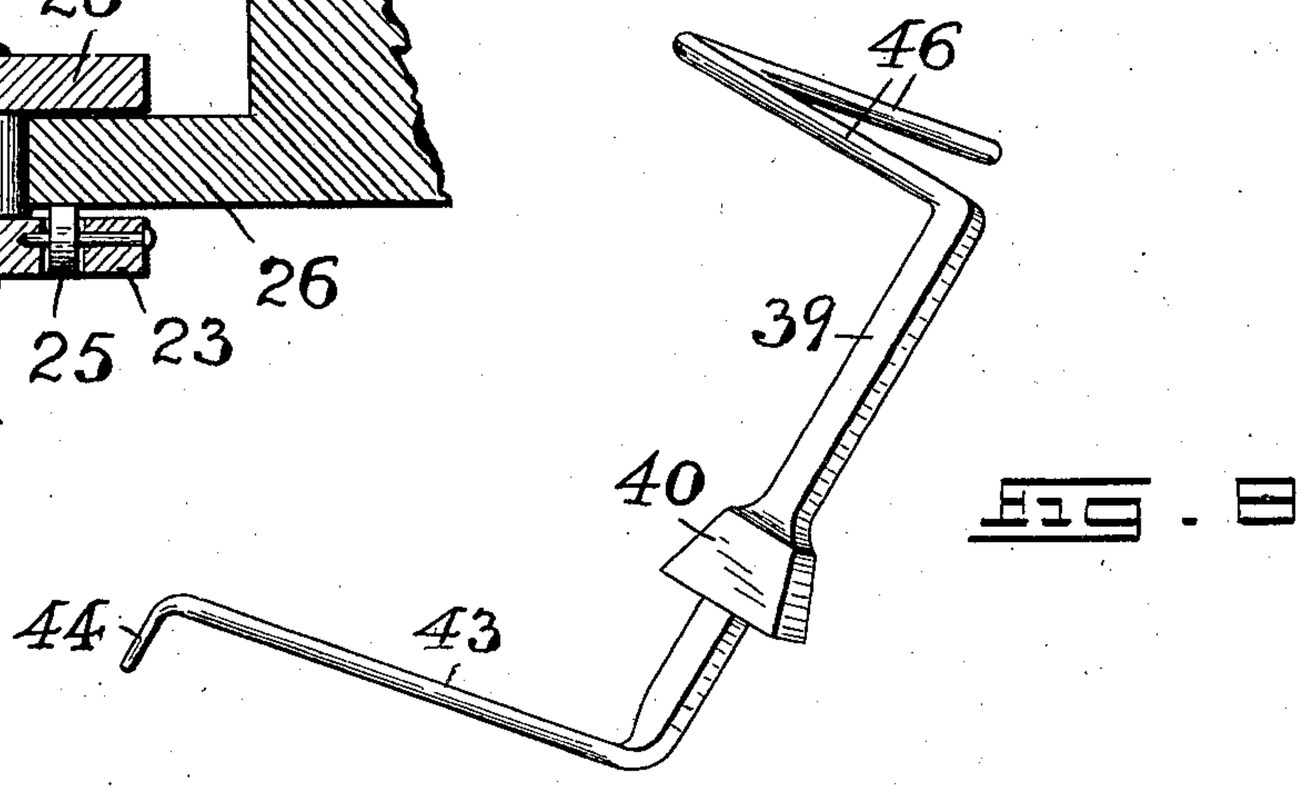

Fig. 8.

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No. 754,155. Patented March 8, 1904.

UNITED STATES PATENT OFFICE.

LEVY MAYBAUM, OF NEWARK, NEW JERSEY.

CARRIAGE-SPACING ATTACHMENT FOR WRITING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 754,155, dated March 8, 1904.

Application filed April 8, 1903. Serial No. 151,618. (No model.)

To all whom it may concern:

Be it known that I, LEVY MAYBAUM, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Carriage-Spacing Attachments for Writing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

My present invention has reference to improvements in that class of writing-machines which are provided with a movable paper-holding carriage such as is employed with type-writing or with adding machines or with combined writing and adding machines; and the primary object of the present invention is to provide a novel mechanism and operating means which shall be of a very simple construction and which is applicable to apparatus or machines of the character above stated, the purpose of such mechanism being to quickly and easily space the paper-holding carriage to any desired point or indication on the scale on the frame of the machine.

A further object of this invention is to provide a means with machines of the character above stated for automatically operating the usual platen-roll, and thereby feeding the paper the proper distance to receive the next row of writing or printing.

The mechanism hereinafter more particularly set forth is admirably adapted for use with combined writing and adding machines, for use more especially in banking-houses and mercantile establishments, where the figures of a number of checks, &c., are written or printed upon a sheet of paper and placed in a column or columns thereon for future use and reference and beneath which column or columns of figures the aggregate amount or sum-total of the said figures is to be written.

With the carriage-spacing mechanism embodying the principles of the present invention and its application to an adding-machine or to a combined writing and adding machine it will be seen that after any number has been written or printed the next number which is to be placed under the first number can be quickly written or printed, no matter how many digits the number contains, the carriage being brought to the proper space by the mechanism, so that each number in the column of numbers will be in its proper place.

A further object of this invention is to provide a simple and efficient mechanism of the character hereinafter fully described which can be applied to existing forms of type-writing machines or to combined writing and adding machines or adding-machines and wherein no structural change of the machine itself is necessary to apply the attachment.

With the various objects of the present invention in view the same consists in the various novel organizations and combinations of devices and their parts, all of which will be more fully described in the accompanying specification and then finally embodied in the clauses of the claim.

The results heretofore set forth are attained by means of mechanism shown in the accompanying drawings, and in which drawings similar characters of reference are employed to designate corresponding parts throughout the several views.

In the said drawings, Figure 1 represents a front elevation of one form of adding-machine provided with the carriage spacing or setting mechanism representing one embodiment of the principles of my present invention. Fig. 2 is a part plan and part horizontal section of the carriage spacing or setting mechanism with a portion of the framework and carriage of the adding-machine represented in plan, the said section being represented as taken on line 2 2 in Fig. 4 of the drawings and all the parts in said Fig. 2 being shown in their normal initial positions. Fig. 3 is a similar view of the devices and parts represented in said Fig. 2, but illustrating them in one of their actuated positions. Fig. 4 is a transverse vertical section taken on line 4 4 in said Fig. 2, and Fig. 5 is a similar section taken on line 5 5 in said Fig. 3. Fig. 6 is a longitudinal vertical section of the attachment, said section being taken on line 6 6 in Fig. 2

looking in the direction of the arrow *x* in said figure. Fig. 7 is a detail sectional representation on line 7 7 in Fig. 2, said view being made on an enlarged scale; and Fig. 8 is a perspective view of a link connection between the carriage spacing or setting mechanism and the carriage for setting the said carriage and also for actuating the platen-roll and moving the latter the proper line-space, so that the next number to be written upon the paper will be placed directly beneath the previously-written number.

Referring now to the several figures of the drawings, the reference character 1 indicates the usual form of platen-roll mounted and supported so as to be capable of being revolved in a frame or carriage 2, the said frame or carriage 2 being capable of lateral motion upon the main frame 3 in the usual manner. In the present instance I have illustrated the use of the carriage setting or spacing attachment with an adding-machine of the character described in my previous Letters Patent, issued May 5, 1903, and numbered 726,959, and the manner of actuating and the operations of the writing or printing devices, by means of which the numbers are to be written upon the paper, and the numbering or registering device arranged upon the carriage 2 being clearly described in the said application these devices need, therefore, not be further described here. With the said platen-roll 1 there may be used the usual hand operating-lever 4 or other suitably-arranged mechanism, by means of which the roll can be actuated and the paper fed beneath the said roll in the usual manner. The lateral motion of the carriage 2 is produced during the operations of printing or writing by the usual mechanism provided for that purpose, and which mechanism is actuated in the usual manner by means of type-actuating levers and a spacing lever or bar, as in any of the known constructions of typewriting machines. For the purpose of the present invention the frame 3 has a scale 5, on which there are eleven graduations numbered from "1" to "11," inclusive, and reading from left to right, as indicated in Fig. 1 of the drawings. The casing 2 is provided with a suitable pointer or index 6, which when the parts are at their normal initial positions always points to "1" on the scale 5.

Coming now to the construction of the carriage-setting mechanism embodying the principles of this invention, the same consists, essentially, of a suitable casing 7, preferably of the cross-section represented in Figs. 4 and 5, the same comprising a box-shaped body 8 and a cover 9, the said body 8 being suitably secured to the side of the main frame 3 of the writing-machine by means of screws 10; but it will be understood that the said body 8 may be attached to the said frame 3 in any other suitable manner and by means of other fastening devices. The said cover 9 is provided with a row of openings 11, in the present instance ten of such openings being used, and the front 12 of the said body 8 is made with a corresponding number of vertically-disposed grooves or guides 13, preferably provided with a set of antifriction-rollers 14 in each groove, as shown. Movably arranged in said grooves or guides 13 are a number of devices 15, each device 15 comprising a main body having its under edge tapering from the bottom in an upward and inward direction to provide the wedge edge or incline 16. The body of each device 15 is also made with a downwardly-extending short member 17 and with an upper straight edge 18, resting normally against the under surface of the cover 9, as shown. Each main body is also made with an upwardly-extending stem or post 19, projecting through an opening 11 in the cover 9, and each stem being preferably provided with a finger-piece or button 20, indicating the number of the key. The key-indicating numbers may also be placed upon the front of the body 8 directly in front of the proper stem or post 19, as indicated in the drawings.

Encircling each stem or post 19 between the under surface of the finger-piece 20 and the upper surface of the cover 9 is a coiled spring 21, the purpose of which is to return the depressed device 15 to its normal initial position when the pressure is removed from the finger-piece 20. It will be understood, however, that in lieu of arranging springs 21 upon the several stems or posts 19 any other means may be employed for returning the said devices 15 to their normal initial positions. From an inspection of the several figures of the drawings it will be seen that the number of devices 15 and their parts is ten, one less than the number of divisions on the scale 5; but it will be understood that the scale may be made with a greater or smaller number of divisions, the number of devices 15 and the openings 11 in the cover 9 and guides 13 being changed accordingly.

The sides 22 of the body 8 are made with rearwardly-extending guides 23, preferably provided with antifriction guide-rollers 24 and 25, arranged more particularly in the manner illustrated in Figs. 6 and 7. Movably arranged upon the rollers 25 and against the rollers 24 and between the guides 23 is a horizontally-arranged reciprocating slide or plate 26. The main body portion 27 of this slide or plate is made thicker than the part 28 to provide a "miter" edge 29 between the said parts 27 and 28, extending at an angle and in the direction illustrated in Figs. 2 and 3. The main body portion 27 is also provided with a chamfer or incline 30 and with a part 31, which is thicker than the part 28, and thereby provides a straight shoulder 32, as shown. The said slide or plate 26 is provided at its front edge with a series of grooved rollers 33, corresponding in number to the number of the

devices 15 and caused by the action of a spring or springs 34 to normally rest against the edges of the downwardly-extending members 17 of the respective devices 15, as clearly illustrated in Figs. 2 and 4. Now from an inspection of the several figures of the drawings it will clearly be seen that the main body portions of the said devices 15 are not of the same surface areas and that the wedge edges or inclines 16 of said body portions vary, the device 15 at the extreme right having the longest incline 16 and the device 15 at the extreme left having the shortest incline 16, while the intermediate devices 15 have their inclines graduated accordingly. It will thus be seen that when a device 15 is forced down its incline 16 will ride against the correspondingly-placed roller 33, connected with the plate or slide 26, which will thereupon be moved in the direction of the arrow *y* (see Fig. 5) a distance proportionate to the length of the incline 16 of the device 15, which has been actuated by the operator. When the pressure is released by the operator, the various springs will return the devices to their normal initial positions. The purpose of the mechanism is to move the carriage 2 from left to right on the frame 3 any desired distance or space, according to the number of digits in the number which is to be written upon the paper and according to the key or button 20 of the device depressed by the operator.

Suitably secured to the carriage 2 is a bracket 35, formed with a downwardly-extending arm 36, provided with suitable guides 37, in which there may be antifriction-rollers 38, as indicated in Figs. 4 and 5. Movably arranged between the said rollers 38 in said guides 37 is a bar 39, having a weighted member 40, normally resting upon the lower of said guides 37, as illustrated in Fig. 4. The portion 41 of said bar 39 below said member 40 extends into and through an opening 42 in the previously-mentioned cover 9 and has an arm 43 bent at a right angle, or approximately so, to the said portion 41, substantially as shown. Under normal conditions this arm 43 rests upon the part 31 and directly in front of the incline or chamfer 30 of the slide or plate 26. A finger 44, provided with a roller 45, extends at right angles, or approximately so, from the free end of said arm 43 in operative rolling contact with the straight shoulder 32, as shown in Fig. 2. When the plate or slide 26 moves in the direction of the arrow *y* in the manner hereinabove stated, then, the miter edge or shoulder 29 being moved directly against the roller 45, the result will be that the carriage 2 is moved upon the frame 3 from left to right a distance proportionate to the movement of the slide or plate 26 and according to the device 15 depressed by the operator. As soon as the roller 45 moves along the miter edge or shoulder 29 the arm 43 will move up the incline or chamfer 30 and upon the raised part 27 of the plate or slide 26, whereby the bar 39 and its weight 40 will receive an upward motion in the guides 37, and will thereby bring a finger or arm 46, which is connected with the upper portion of the bar 39 and is movably arranged in a guide 47, in slidable lifting engagement with the under surface of the hand-lever 4 to thereby actuate the platen-roll and move the paper one line-space. Thus it will be seen that during the lateral movement of the carriage 2 for proper spacing the platen-roll 1 is also moved for bringing the paper in proper position to receive the number which is to be written under the previously-written number.

The arrangement of the mechanism connected with the carriage and which is to be actuated by the space-indicating devices is such that the carriage will be moved over a number of spaces less one than the digit-indicating number of the depressed actuating device, the reason for this being that when a number of one digit is desired the carriage while writing being in its initial position need not be moved and the number can be written as usual in type-writers; but when a number of two digits is to be written then the carriage must be moved one space from left to right, which is accomplished by the depression of the post 19, bearing the digit-indicating number "2," and so on for any number of digits, as is clearly set forth in the following description.

The spacing operation of the device is briefly as follows: Suppose the numbers "469," "10," "5," "5678," and "96742102" are to be written under each other in a column. The first number to be written is "469." The operator notes that this is a number of three digits, and he thereupon presses upon the finger-piece 20 bearing the number "3." Immediately the carriage 2 moves from its normal position (indicated in Fig. 1 of the drawings) two spaces from left to right, so that the pointer or index 6 will become located in front of the "3" division on the scale. The number "469" is now written in the ordinary manner by means of the usual type-actuating levers. The next number to be written is "10," a figure of two digits. The operator next depresses the finger-piece 20 bearing the number "2." The carriage thereupon moves back one space, the pointer becoming located opposite the "2" division on the scale 5, and at the same time the platen-roll has been actuated and moved the paper ahead one line-space. The number "10" is then written by the operator in the usual manner. After each number has been written the pointer or index 6 will always return back over the "1" division on the scale 5, and the parts of the mechanism are in their initial positions. The number "5" is next to be written. This being a number of one digit, the lever 4 is moved by hand to actuate the platen-roll 1,

whereby the paper is moved one line-space, and the number "5" is then printed upon the paper in the usual manner. The next number to be written is "5678," a number of four digits. The finger-piece 20 bearing the number "4" is then depressed, and the pointer 6 and carriage are moved back the proper space that the pointer will be located opposite the "4" division on the scale, the paper at the same time having been fed one line-space, and the number "5678" can then be written in the usual manner. Now coming to the last number, "96742102," a number of eight digits, the finger-piece 20 bearing an "8" is depressed, and the carriage is moved back seven spaces until the pointer 6 rests directly in front of the "8" division on the scale, the paper having also been moved one line-space. This number can then be written in the usual manner. Any number of figures can be written in this manner in columns, the carriage always being properly spaced, so that the digits representing the units, tens, hundreds, &c., of the numbers will be in the vertical columns on the paper representing the units, tens, hundreds, &c.

By means of the carriage-spacing attachment for writing and adding machines of the various kinds and embodying the principles of the present invention the carriage can be quickly brought in its proper space desired, and this is more rapidly accomplished than when done by hand, and there will be no mistakes due to misplacing the carriage, as is possible when done by hand.

It will be seen that the device is very simple, can be cheaply made, and is efficient in its operations.

I am fully aware that changes may be made in the various arrangements and combinations of the devices and parts, as well as in the details of the construction thereof, without departing from the scope of my present invention. Hence I do not limit my invention to the exact arrangements and combinations of the devices and their parts as described in the previous specification and as illustrated in the accompanying drawings, nor do I confine myself to the exact details of the construction of the said parts.

Having thus described my invention, what I claim is—

1. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism connected with said carriage and comprising a number of depressible posts bearing digit-indicating numbers, said mechanism being constructed to move said carriage over a number of spaces less one than the digit-indicating number of the depressed post, substantially as and for the purposes set forth.

2. In a writing-machine, the combination, with the carriage, of a series of space-indicating devices, comprising a number of depressible posts bearing digit-indicating numbers, and means connected with the carriage adapted to be actuated by said devices to move said carriage over a number of spaces less one than the digit-indicating number of the depressed post, substantially as and for the purposes set forth.

3. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, and means connected with the carriage adapted to be actuated by said devices to move said carriage over a number of spaces less one than the digit-indicating number of the depressed post, substantially as and for the purposes set forth.

4. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, a horizontally-moving slide, adapted to be actuated by the depression of any one of said vertically-moving devices, and means between said slide and the carriage for moving said carriage over any desired space when the slide is actuated, substantially as and for the purposes set forth.

5. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, each vertically-moving device having an incline, a horizontally-moving slide, adapted to be actuated by an incline of any one of the depressed vertically-moving devices, and means between said slide and the carriage for moving said carriage over any desired space when the slide is actuated, substantially as and for the purposes set forth.

6. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, each vertically-moving device having an incline, a horizontally-moving slide, rollers on said slide in engagement with the said inclines, and means between said slide and the carriage for moving said carriage over any desired space when the slide is actuated, substantially as and for the purposes set forth.

7. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, a horizontally-moving slide, adapted to be actuated by the depression of any one of said vertically-moving devices, a miter-shoulder on said slide, a vertically-movable bar connected with said carriage, and a portion of said bar being in slidable engagement with said miter-

shoulder, substantially as and for the purposes set forth.

8. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, a horizontally-moving slide, adapted to be actuated by the depression of any one of said vertically-moving devices, a miter-shoulder on said slide, a vertically-movable bar connected with said carriage, an arm and finger connected with said bar, and a roller on said finger in engagement with said miter-shoulder, substantially as and for the purposes set forth.

9. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, each device, bearing digit-indicating numbers, a vertically-moving device having an incline, a horizontally-moving slide, adapted to be actuated by an incline of the depressed vertically-moving device, a miter-shoulder on said slide, a vertically-movable bar connected with said carriage, and a portion of said bar being in slidable engagement with said miter-shoulder, substantially as and for the purposes set forth.

10. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, each vertically-moving device having an incline, a horizontally-moving slide, adapted to be actuated by an incline of the depressed vertically-moving device, a miter-shoulder on said slide, a vertically-movable bar connected with said carriage, an arm and finger connected with said bar, and a roller on said finger in engagement with said miter-shoulder, substantially as and for the purposes set forth.

11. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, each vertically-moving device having an incline, a horizontally-moving slide, rollers on said slide in engagement with the said inclines, for actuating said slide, a miter-shoulder on said slide, a vertically-movable bar connected with said carriage, and a portion of said bar being in slidable engagement with said miter-shoulder, substantially as and for the purposes set forth.

12. In a writing-machine, the combination, with the carriage, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, each vertically-moving device having an incline, a horizontally-moving slide, rollers on said slide in engagement with the said inclines, for actuating said slide, a miter-shoulder on said slide, a vertically-movable bar connected with said carriage, an arm and finger connected with said bar, and a roller on said finger in engagement with said miter-shoulder, substantially as and for the purposes set forth.

13. In a carriage-spacing attachment for writing-machines, the combination, with a casing, vertical guides in said casing, and a cover provided with a series of openings, of a series of vertically-moving actuating devices in said vertical guides provided with posts extending through the openings in said cover, each post having a finger-piece, and a carriage-spacing mechanism in said casing adapted to be actuated by any one of said vertically-moving devices, substantially as and for the purposes set forth.

14. In a carriage-spacing attachment for writing-machines, the combination, with a casing, vertical guides in said casing, and a cover provided with a series of openings, of a series of vertically-moving actuating devices in said vertical guides provided with posts extending through the openings in said cover, each post having a finger-piece, and a horizontally-moving carriage-spacing slide in said casing adapted to be actuated by any one of said vertically-moving devices, substantially as and for the purposes set forth.

15. In a carriage-spacing attachment for writing-machines, the combination, with a casing, vertical guides in said casing, and a cover provided with a series of openings, of a series of vertically-moving actuating devices in said vertical guides provided with posts extending through the openings in said cover, each post having a finger-piece, an incline connected with each vertically-moving device, and a horizontally-moving carriage-spacing slide in said casing, adapted to be actuated by an incline of any one of said vertically-moving devices, substantially as and for the purposes set forth.

16. In a carriage-spacing attachment for writing-machines, the combination, with a casing, vertical guides in said casing, and a cover provided with a series of openings, of a series of vertically-moving actuating devices in said vertical guides provided with posts extending through the openings in said cover, each post having a finger-piece, an incline connected with each vertically-moving device, a horizontally-moving carriage-spacing slide in said casing, and rollers on said slide in engagement with the said inclines for actuating said slide, substantially as and for the purposes set forth.

17. In a carriage-spacing attachment for writing-machines, the combination, with a casing, vertical guides in the front of said casing, horizontal guides at the sides of said casing, and rollers in said guides, of a series of vertically-moving actuating devices in said vertical guides provided with posts, each post having a finger-piece, and a carriage-spacing mechanism movably arranged against the rollers in

said side guides and adapted to be actuated by any one of said vertically-moving devices, substantially as and for the purposes set forth.

18. In a carriage-spacing attachment for writing-machines, the combination, with a casing, vertical guides in the front of said casing, horizontal guides at the sides of said casing, and rollers in said guides, of a series of vertically-moving actuating devices in said vertical guides provided with posts, each post having a finger-piece, and a horizontally-moving carriage-spacing slide movably arranged against the rollers in said side guides and adapted to be actuated by any one of said vertically-moving devices, substantially as and for the purposes set forth.

19. In a carriage-spacing attachment for writing-machines, the combination, with a casing, vertical guides in the front of said casing, horizontal guides at the sides of said casing, and rollers in said guides, of a series of vertically-moving actuating devices in said vertical guides provided with posts, each post having a finger-piece, an incline connected with each vertically-moving device, and a horizontally-moving carriage-spacing slide movably arranged against the rollers in said side guides, and adapted to be actuated by any one of said vertically-moving devices, substantially as and for the purposes set forth.

20. In a carriage-spacing attachment for writing-machines, the combination, with a casing, vertical guides in the front of said casing, horizontal guides at the sides of said casing, and rollers in said guides, of a series of vertically-moving actuating devices in said vertical guides provided with posts, each post having a finger-piece, an incline connected with each vertically-moving device, a horizontally-moving carriage-spacing slide movably arranged against the rollers in said side guides, and rollers on said slide in engagement with the said inclines for actuating said slide, substantially as and for the purposes set forth.

21. In a writing-machine, the combination, with the carriage and platen-roll, of a series of space-indicating devices, comprising a number of depressible posts bearing digit-indicating numbers, means connected with the carriage adapted to be actuated by said devices to move said carriage over a number of spaces less one than the digit-indicating number of the depressed post, and mechanism for rotating said platen-roll in its bearings simultaneously with the moving of said carriage over the desired number of spaces, substantially as and for the purposes set forth.

22. In a writing-machine, the combination, with the carriage and platen-roll, of a series of space-indicating devices, comprising a number of depressible posts bearing digit-indicating numbers, means connected with the carriage adapted to be actuated by said devices to move said carriage over a number of spaces less one than the digit-indicating number of the depressed post, an actuating-lever connected with said platen-roll, and mechanism for raising said lever and rotating said platen-roll in its bearings simultaneously with the moving of said carriage over the desired number of spaces, substantially as and for the purposes set forth.

23. In a writing-machine, the combination, with the carriage, and the platen-roll, of a slide-plate, means for causing a sliding movement of said plate, and means arranged between said plate and the carriage adapted to move the carriage over a space and simultaneously therewith actuate the platen-roll, substantially as and for the purposes set forth.

24. In a writing-machine, the combination, with the carriage, the platen-roll and its actuating-lever, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and a finger-piece on each device, bearing digit-indicating numbers, a horizontally-moving slide, adapted to be actuated by the depression of any one of said vertically-moving devices, a miter-shoulder on said slide, a vertically-movable bar connected with said carriage, a lower portion on said bar in slidable engagement with said slide and the miter-shoulder thereof, and an arm on the upper part of said bar in engagement with the actuating-lever of said platen-roll, substantially as and for the purposes set forth.

25. In a writing-machine, the combination, with the carriage, the platen-roll and its actuating-lever, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and a finger-piece on each device, bearing digit-indicating numbers, a horizontally-moving slide, adapted to be actuated by the depression of any one of said vertically-moving devices, a miter-shoulder on said slide, a vertically-movable bar connected with said carriage, an arm connected with the lower portion of said bar in slidable engagement with said slide, a finger on said arm, a roller on said finger in engagement with said miter-shoulder, and an arm on the upper part of said bar in engagement with the actuating-lever of said platen-roll, substantially as and for the purposes set forth.

26. In a writing-machine, the combination, with a carriage, and a platen-roll, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, a horizontally-moving slide adapted to be actuated by the depression of any one of said vertically-moving posts, means between said slide and the carriage for moving said carriage over any desired space when the slide is actuated, and mechanism for moving said platen-roll in its bearings simultaneously with the spacing of the carriage, substantially as and for the purposes set forth.

27. In a writing-machine, the combination,

with a carriage, and a platen-roll, of a carriage-spacing mechanism, comprising, a series of vertically-moving devices, a post and finger-piece on each device, bearing digit-indicating numbers, a horizontally-moving slide adapted to be actuated by the depression of any one of said vertically-moving posts, means between said slide and the carriage for moving said carriage over any desired space when the slide is actuated, an actuating-lever connected with said platen-roll, and mechanism for raising said lever and rotating said platen-roll in its bearings simultaneously with the spacing of the carriage, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 4th day of April, 1903.

LEVY MAYBAUM.

Witnesses:
FREDK. C. FRAENTZEL,
GEO. D. RICHARDS.