

No. 698,469.

Patented Apr. 29, 1902.

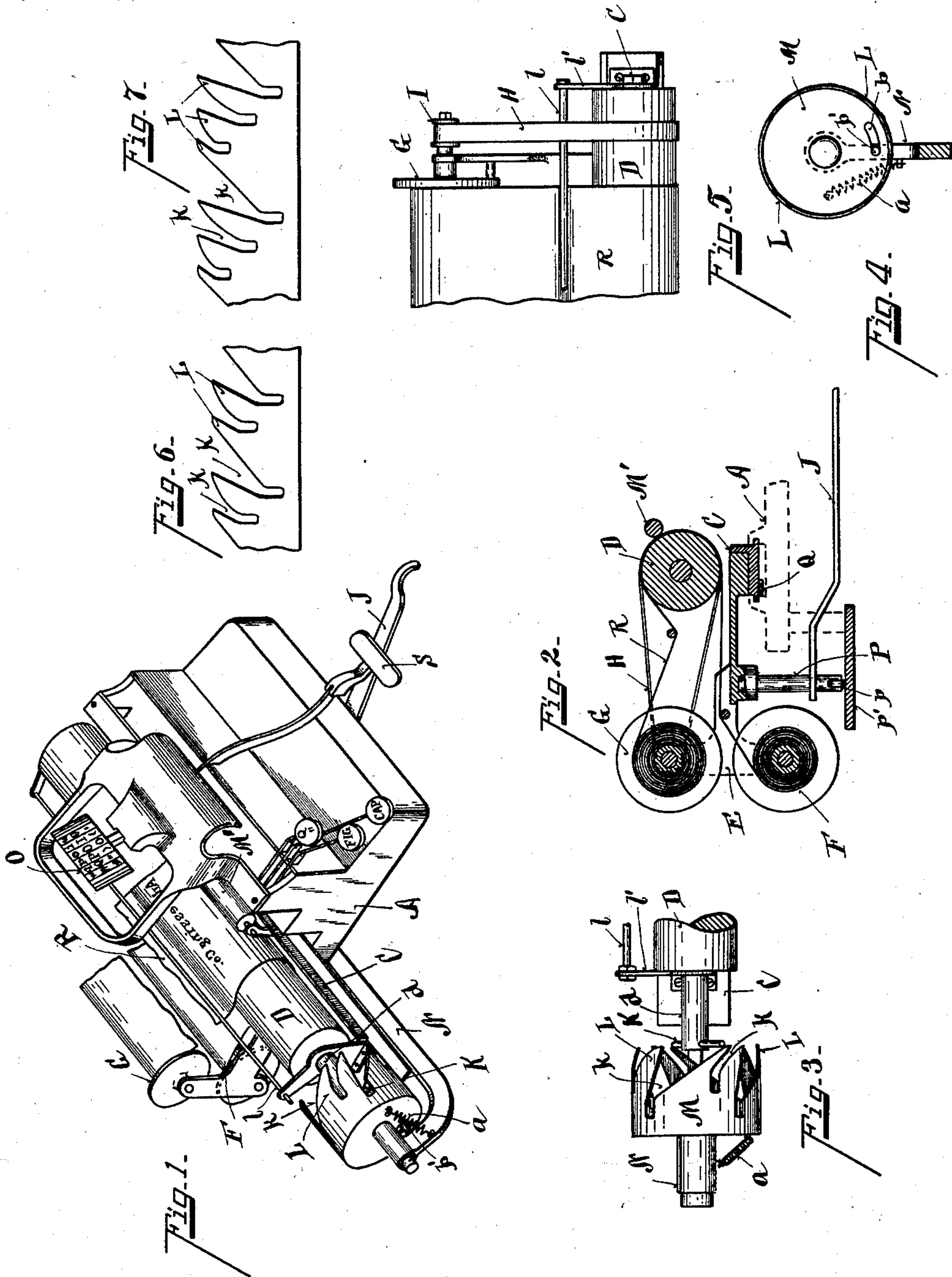
C. L. DOWNEY.

ADDRESSING ATTACHMENT FOR TYPE WRITERS.

(Application filed Oct. 1, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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2 Sheets—Sheet 2.

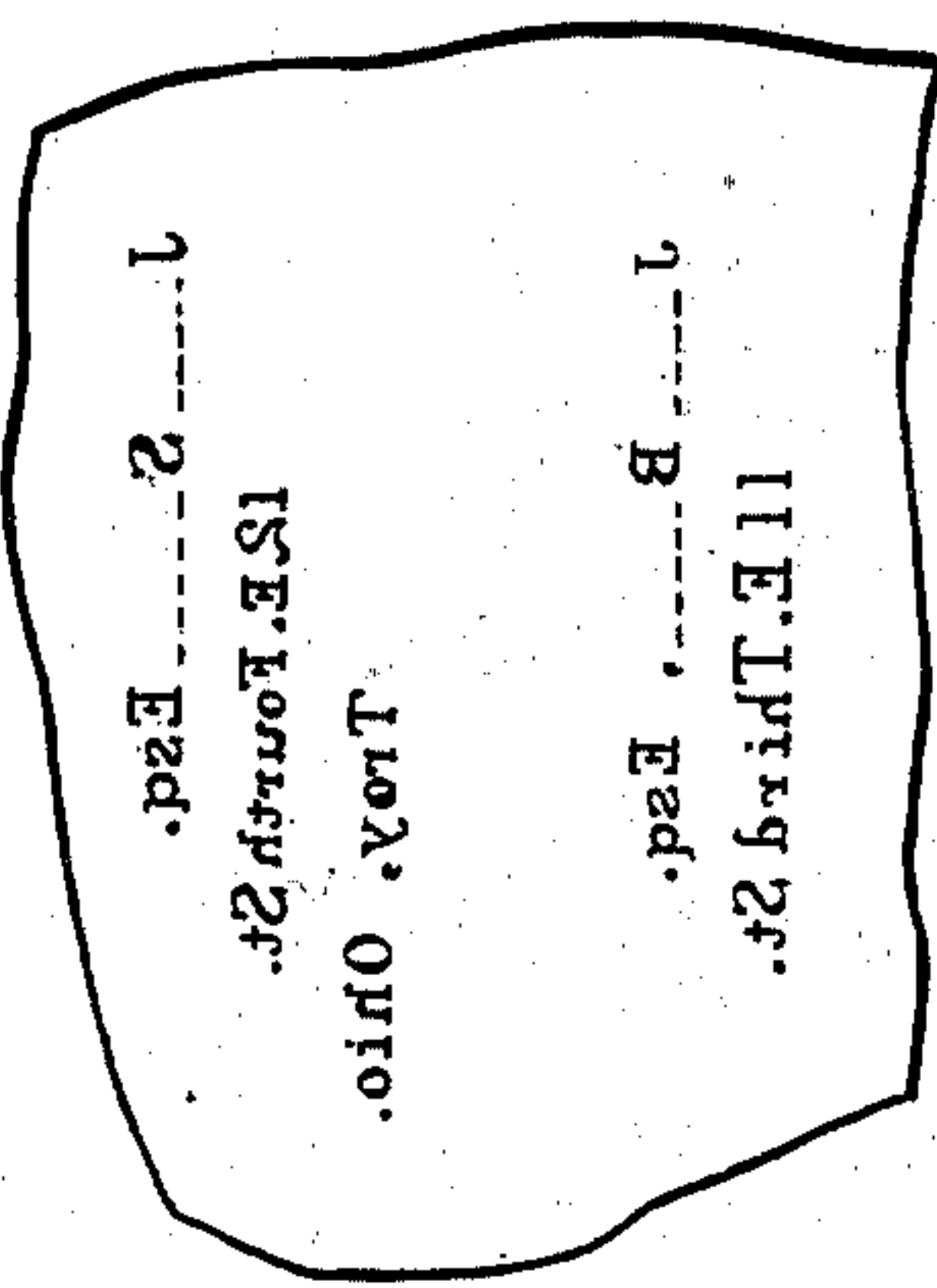


Fig. 9

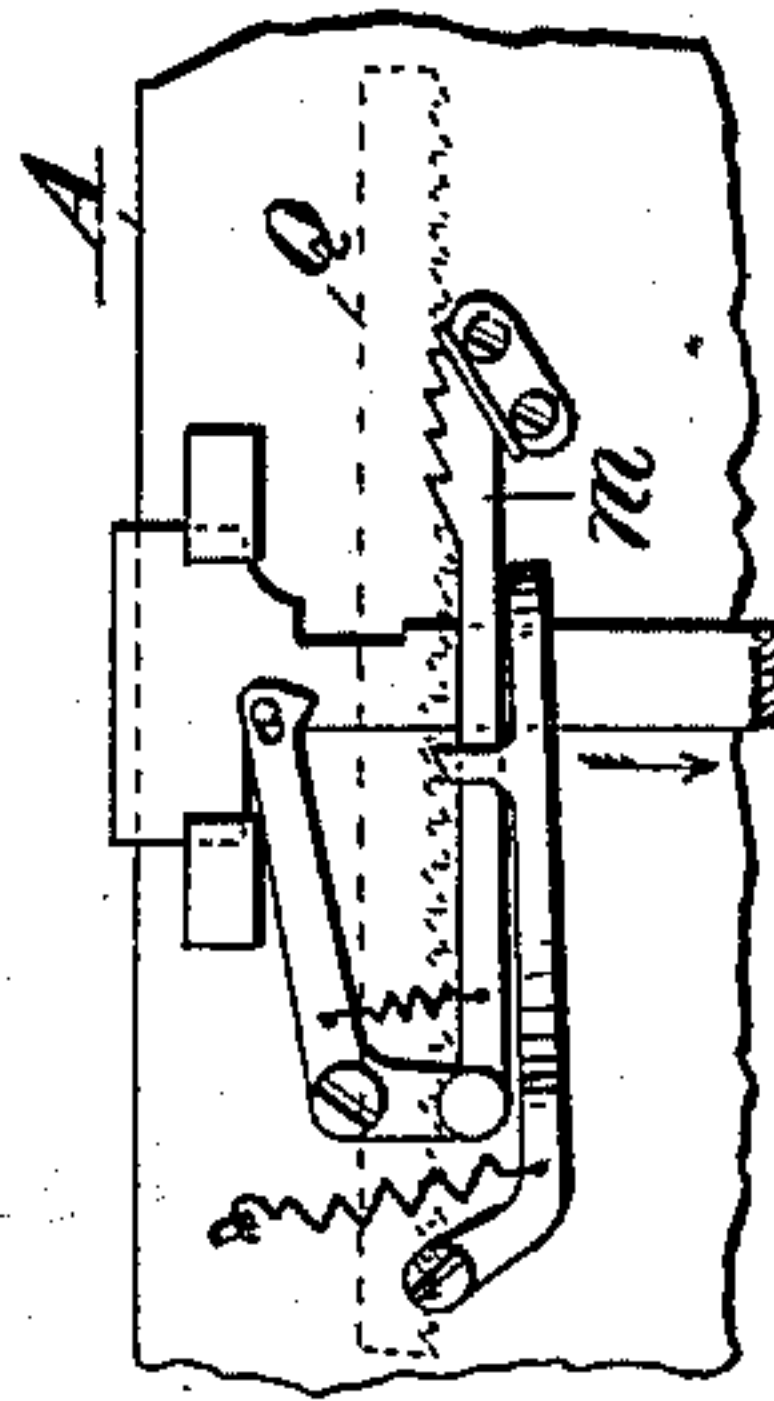


Fig. 8

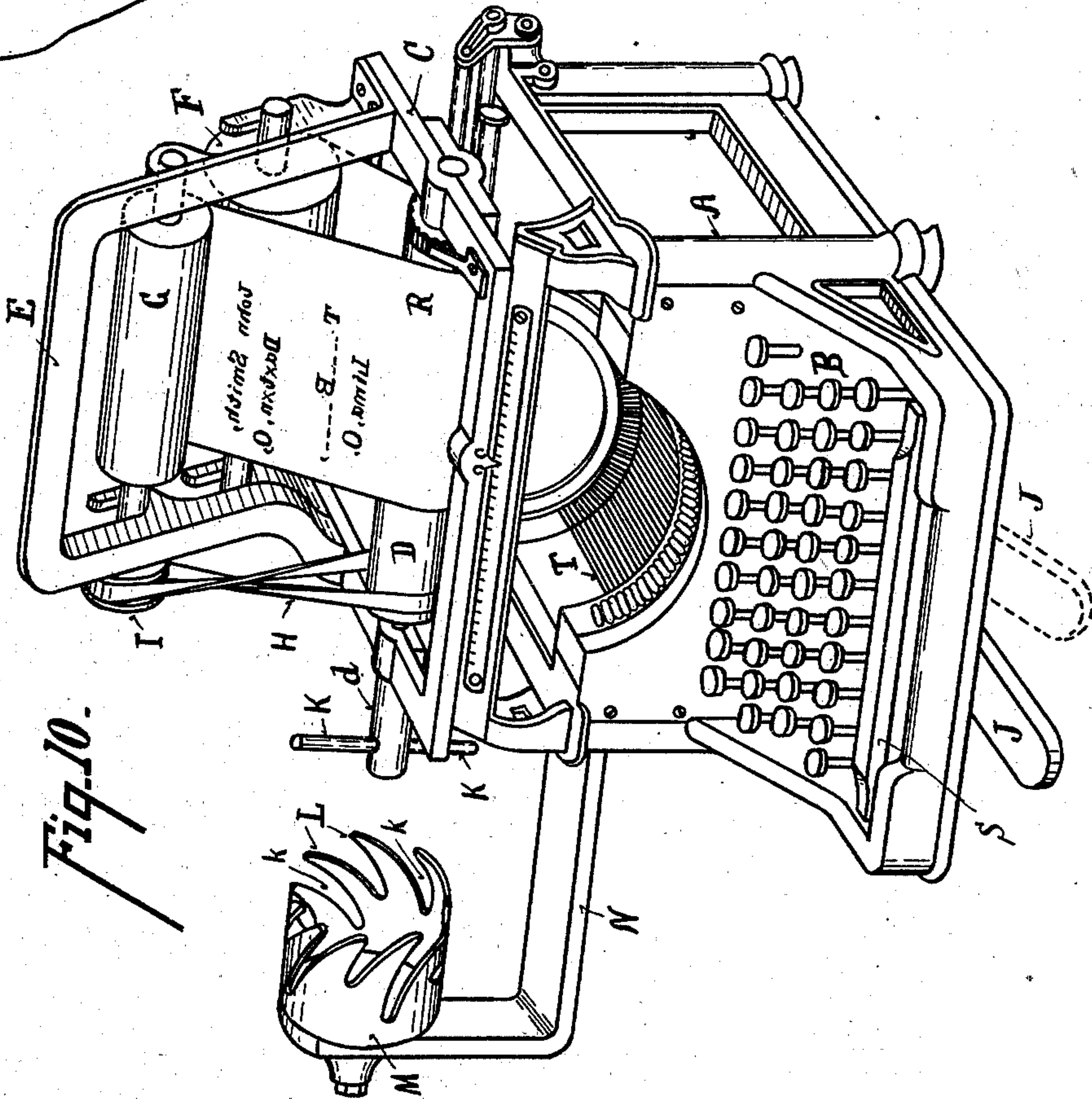


Fig. 10

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UNITED STATES PATENT OFFICE.

CLEMENT LEE DOWNEY, OF CINCINNATI, OHIO.

ADDRESSING ATTACHMENT FOR TYPE-WRITERS.

SPECIFICATION forming part of Letters Patent No. 698,469, dated April 29, 1902.

Application filed October 1, 1900. Serial No. 31,671. (No model.)

To all whom it may concern:

Be it known that I, CLEMENT LEE DOWNEY, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Addressing Attachments for Type-Writers, of which the following is a specification.

The primary object of my invention is to provide means whereby a number of words, such as addresses, can be consecutively written on a single continuous transcript-sheet without removal from the machine, the type being in such position that an impression taken from the transcript-sheet will be in legible form. For addressing envelopes, for instance, the full speed capacity of the machine is utilized, as an entire list of addresses may be prepared on the transcript-sheet without loss of time in removals and insertions. Further, the transcript-sheet can be used for impressions more than once, so that frequently the preparation of a single transcript-sheet will allow that list of addresses to be repeatedly used. The saving of time, labor, and expense over any previous known method of addressing envelopes is enormous. Also the transcript-sheet can be saved or a carbon copy-strip run through with it and converted into a permanent record of the list of addresses prepared.

Another object of my invention is to provide an automatic spacing device both for the lineation and for the indentation.

Other features of my invention relate to mechanisms designed to most effectively carry out the ideas previously stated, the features of which are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of a type-writer with my improvement attached thereto. Fig. 2 is a transverse vertical section showing the relation of the platen, supporting-rolls, carriage, and shipping mechanism. Fig. 3 is a top plan view of the spacing-cam and its platen connection. Fig. 4 is a side elevation of the cam. Fig. 5 is a sectional plan view of the platen, supporting-rolls, and mechanism for turning said rolls. Fig. 6 is a plan view of a section of the spacing-cam. Fig. 7 is a plan view of a modification of Fig.

6. Fig. 8 is a plan view of spacing mechanism with rack-bar shown in dotted lines as applied to Blickenderfer style of type-writer. Fig. 9 is a plan view of a section of the transcript-sheet, illustrating the script and spacing. Fig. 10 is a modification of Fig. 1.

My improvements may be connected to any type-writer.

In Fig. 1 I have shown the invention applied to the Blickenderfer style type-writer, and in Fig. 10 it is shown applied to the Underwood style type-writer. In order that impressions may be taken from a transcript-sheet upon which the addresses are first written, it is necessary that the characters printed upon the transcript-sheet shall be laterally reversed and also that the type-writer carriage be made to travel in the reverse direction from the normal—that is, from left to right. The first object I accomplish by placing the type on the type-bar T or type-roll O (where Blickenderfer style is used) in their proper legible order, so that when the character is struck upon the transcript-sheet it will be laterally reversed, and the impression taken from the transcript-sheet will be the facsimile of the original arrangement of the type—that is, in the legible position. The second object I accomplish by providing the type-writer carriage C with a tension device of the usual form, but adapted to make the carriage travel from left to the right of the machine and inverting the rack Q, so that the teeth are inclined to the right instead of to the left, whereby when the pawl is released by the depression of the keys the carriage yields to the tension and is fed one space to the right. Thus the characters are inversely printed on the transcript-sheet from left to right, so that an impression taken therefrom is in correct position.

As one of the great desiderata is the saving of time, an automatic spacer is of great importance. This spacing device should be placed in the path of travel of the carriage to the left of the machine and either directly or indirectly engage the platen-roll and simultaneously indent and space.

In writing addresses on the long transcript-sheet which I employ there are not only the spaces between the lines of a single address to be determined, but each line of the address must have a different indentation, and

there must be a considerable space between the separate addresses in order that the impressions may be made on the envelops, and all three of these objects should preferably
5 be accomplished by a single device.

The form of spacing device which I have shown consists of the following instrumentalities: As the carriage moves from the left-hand side of the machine the indentation must be
10 made from this (the left) side, and to this end I mount on the type-writer frame A an upturned arm N, the end of which terminates, preferably, opposite the extended axle d of the platen D. Upon the end of this arm is placed a spacing
15 device M, consisting, in the preferred form of construction, of a hollow cylinder, the peripheral walls of which are substantially parallel with the platen-roll and provided with cam-notches k and teeth L of different depth
20 and of different pitch in the vertical plane. This indenting and spacing device has just sufficient oscillatory motion on the end of the arm N to allow the cam-notches to engage and clear a shipping-pin K. The notches
25 are also widest at the outer edge and taper inwardly, so as to effectively engage and guide the said shipping-pin. The arm N is provided with a stop-pin b' , which engages through a slot b in the indenting and spacing
30 device, it being obvious that the movement in either direction is limited by the length of the slot. (See Figs. 1, 3, and 4.)

a represents a spring attached, respectively, to the indenting and spacing device and to
35 the arm serving to hold the indenting and spacing device to one limit of its movement, so that when it is moved in the opposite direction in spacing the platen it will be automatically returned by this spring in position
40 for the next operation. The platen-roll is provided with an extended axle d , to which is fixed diametrically a shipping-pin K. The axle is extended to the left of the platen sufficiently to allow the shipping-pin to engage
45 with the cam-notches when the carriage is retracted to the left hand of the type-writer, which is its initial position.

Addresses may be made sometimes on two and sometimes on three lines, and the notches
50 on the indenting and spacing device can be greater or less to make two or more lines or made of any required depths or pitches as desired, one notch, the steepest, of course serving simply to make the greatest space
55 employed between the separate addresses. In Fig. 7 the notches are adapted to make a three-line address, while in Figs. 3 and 6 a two-line address.

My preferred method of supporting and
60 feeding the transcript-sheet R involves the following instrumentalities: Attached to the rear edge of said carriage C is a bracket-arm E. In the Blickenderfer style the carriage has a vertical depending pedestal P, carrying an antifriction-roll p , resting and traveling
65 upon the rail p' , so as to steady the travel of this bracket-arm. The outer end of said

arm is of T form, upon the extremities of which are journaled in vertical plane a supporting-roll F, containing the transcript-sheet R, and above it is journaled the receiving-roll G, the transcript-sheet passing from roll F around the platen and thence on to the roll G.

l represents a tension-rod mounted on arms
75 l' , projecting radially from each end of the axle of the platen-roll. It is disposed slightly below the periphery of the platen, and the transcript-sheet passes under it, whereby the transcript-sheet is held down taut on the
80 platen. (See Figs. 1, 2, 3, and 5.)

H represents a belt passing around, respectively, the platen and a pulley I, fixed to the outer end of the axle of the receiving-roll G. A suitable belt-slipping device may be em-
85 ployed with the pulley in order to prevent any strain or undue pulling of the transcript-sheet as the diameter of the receiving-roll increases.

In order to conveniently shift the carriage
90 to the left-hand side, a shift-lever J is pivoted to the frame of the type-writer, the outer end of which is attached to the pedestal P, so that when the spacing-blank key S is depressed, operating the spacing-lever mechanism S', the pawl m will be disengaged from
95 the rack Q and the carriage may be shifted from right to left—that is, in a direction reverse to the normal tension exerted on the carriage. 100

M' represents a small roll suitably secured to the carriage, thus traveling with the carriage and in the same direction as the platen-roll D, against which it bears, coacting therewith for the feeding of the paper. (See Fig. 2.) 105

In the Underwood style of type-writer (shown in Fig. 10) the frame E is supported directly on top of the carriage, and the supporting-roll F and receiving-roll G are journaled in the frame over the carriage; but the
110 principle remains the same.

Mode of operation: The carriage is placed at its initial left-hand position with the shipping-finger K engaging the deepest notch, which of course makes the shallowest indentation customarily employed in the first
115 line of an address. The keyboard B is operated in the usual manner until the first line of the address is written. Then the spacing-key S is depressed and the lever J operated
120 to return the carriage to its initial position, which shifting of the carriage brings the shipping-finger into engagement with the outer walls of the next notch. As the finger follows the inclined wall of this notch it is turned,
125 thus spacing the platen-roll, and its movement to the left is limited by the extremity of that notch. Thus the platen is revolved, forming a space equal to the inclination of the last notch engaged. The shipping-finger will
130 each time be revolved into position to engage a different notch on the next retraction of the carriage. In the preferred form the notches are in duplicate form, a notch at a

given inclination and depth having its duplicate diametrically on the opposite periphery of the cam, so that the shipping-finger extending diametrically across the axle of the platen engages these duplicate notches simultaneously upon opposite sides of the finger, thus giving the platen a turning action, as if the shipping-finger were grasped between the first finger and the thumb. The revolution of the platen D is transmitted by belt H to the receiving-roll G, which as it turns simultaneously receives the paper fed to it by the revolving platen-roll D, which unwinds the transcript-sheet from supporting-roll F. When the transcript-sheet is prepared with a full list of the addresses, the impression may be taken in any desired manner, the transcript-sheet being moistened and appropriately placed over the separate envelopes. This is a very speedy operation.

The entire operation of this machine is as nearly automatic as it is possible to be, the only work of the operator being the manipulation of the keyboard and the movement of lever J. The instrumentalities employed admit of a very wide range of mechanical equivalents for accomplishing the objects of this invention, and I do not wish to limit myself any more particularly than the specific enumeration of the elements in the claims may demand.

Having described my invention, I claim—

1. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a spacing and indenting device adapted to be engaged by said carriage and limit its travel and to automatically space the platen-roll, substantially as specified.

2. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a spacing and indenting device located at the initial end of the carriage travel adapted to be engaged thereby, means on said spacing and indenting device and carriage adapted to automatically space and indent the platen, substantially as specified.

3. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a spacing and indenting device located at the initial end of carriage travel adapted to be engaged thereby to revolve the platen, the said spacing and indenting device having two or more different indentation-stops, said stops adapted to be successively presented to said carriage, substantially as specified.

4. In combination with the carriage of a type-writer, a platen-roll journaled thereon, having an extended axle on the initial end of the carriage travel, a spacing and indenting device located at the initial end of the carriage travel, the said spacing and indenting device having walls with notches of varying depth and pitch and a finger on said extended platen-axle adapted to engage into said notches whereby the initial position of the carriage is determined and the platen revolved, substantially as specified.

5. In combination with the carriage of a type-writer, a platen-roll journaled thereon having an extended axle on the initial end of the carriage travel, a spacing and indenting device having notches of varying depth and pitch, located at the initial end of the carriage travel, a shifting-finger on the said extended platen-axle adapted to engage into said notches to revolve the platen-roll and determine the initial position of the carriage and means for shifting said carriage, substantially as specified.

6. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a spacing and indenting device located at the initial end of carriage travel having notches formed therein of varying depth in a horizontal plane, and inclined in a vertical plane, a projection on the platen-roll adapted to successively engage into said notches when the carriage is retracted to its initial position, substantially as specified.

7. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a tension device exerting pressure on the carriage to the right, mechanism actuated by the keyboard adapted to feed the carriage from left to right, type arranged in the normal legible position in the machine, a spacing and indenting device, and a shipping-lever on the said carriage adapted to engage said carriage with said spacing and indenting device whereby the platen-roll is automatically spaced and indented, substantially as specified.

8. In combination with the carriage of a type-writer, a tension device exerting pressure on the carriage to the platen-roll journaled on said carriage, mechanism actuated by the keyboard adapted to feed the carriage from left to right, an extended axle at the initial end of the platen-roll, a spacing and indenting device located opposite the said extended axle within the path of carriage travel, the said spacing and indenting device having notches of varying depth and pitch, a finger on the extended platen-axle adapted to engage into said notches whereby the platen-roll is spaced and indented, and type whereby the characters are horizontally printed inversely upon a transcript-sheet, substantially as specified.

9. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a spacing and indenting device located at the initial end of the path of travel of the carriage, shipping-lever adapted to throw said carriage in engagement with said spacing and indenting device to automatically space and indent the platen-roll, a supplemental frame mounted on the carriage, a supporting and receiving roll journaled in said frame and means for revolving said rolls, substantially as specified.

10. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a tension device exerting pressure on the carriage to the right, mechanism actuated by the

keyboard adapted to feed the carriage from the left to right, type adapted to be inversely printed upon a transcript-sheet, a supplemental frame mounted on the carriage, a supporting and receiving roll journaled in the frame and a power-transmitter between one of said rolls and the platen-roll, a spacing and indenting device located at the initial end of the carriage travel, a projection on the said platen-roll adapted to engage the spacing and indenting device to revolve the platen-roll and determine its initial position, and means for shifting said carriage toward said spacing and indenting device, substantially as specified.

11. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a spacing and indenting device at the initial end of carriage travel, a cam provided with notches whose depth determines the indentation of the platen-roll and whose pitch determines the interlineal space, a projection on the platen-roll adapted to engage said cams, and means for shifting the carriage toward the spacing device, substantially as specified.

12. In combination with the carriage of a type-writer a platen-roll journaled thereon, a spacing and indenting device at the initial end of carriage travel, having cylindrical walls extended toward the platen-roll, duplicate notches diametrically opposite each other in the peripheral walls of said spacing device whose depth determines the degree of platen indentation, and whose pitch determines the interlineal spacing of said platen-roll, a projection on said platen-roll adapted to simultaneously engage the duplicate notches, and means for shifting said carriage toward the spacing and indenting device, substantially as specified.

13. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a spacing and indenting device located at the initial end of carriage travel having notches of varying depth and pitch, a projection on said platen adapted to engage said notches, means for successively presenting the different notches to said projection, and a lever for shifting said carriage toward the spacing and indenting device, substantially as specified.

14. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a spacing and indenting device located at the initial end of the carriage travel, the said spacing and indenting device having notches of varying depth and pitch presented toward the platen-roll, a finger on said platen-roll adapted to engage into said notches, whereby the platen-roll is rotated and the finger successively presented to a different notch at each revolution, substantially as specified.

15. In combination with the carriage of a type-writer, a platen-roll journaled thereon, a tension device exerting pressure on the carriage to the right, mechanism actuated by the keyboard adapted to feed the carriage from the left to right, type adapted to be inversely printed upon a transcript-sheet, a supplemental frame mounted on the carriage, a supporting and receiving roll journaled in the frame and a power-transmitter between one of said rolls and the platen-roll, a spacing and indenting device located at the initial end of the carriage travel, and means for shifting said carriage toward said spacing and indenting device, substantially as specified.

16. In combination with the carriage of a type-writer, a platen journaled thereon, a tension device exerting pressure to the right, mechanism actuated by the keyboard to feed the carriage from left to right, and an automatic indenting device located in the initial end of the carriage travel and actuated thereby, substantially as specified.

17. In combination with the carriage of a type-writer, a platen journaled thereon, a tension device exerting pressure to the right, mechanism actuated by the keyboard to feed the carriage from left to right, means mounted on the carriage for feeding and receiving a transcript-sheet to and from the platen, and an indenting device located in the initial end of the carriage travel and actuated thereby, substantially as specified.

In testimony whereof I have hereunto set my hand.

CLEMENT LEE DOWNEY.

Witnesses:

OLIVER B. KAISER,
PEARL MCMICHAEL.