

(No Model.)

G. C. ELLIOTT.
TYPE WRITING MACHINE.

2 Sheets—Sheet 1.

No. 573,081.

Patented Dec. 15, 1896.

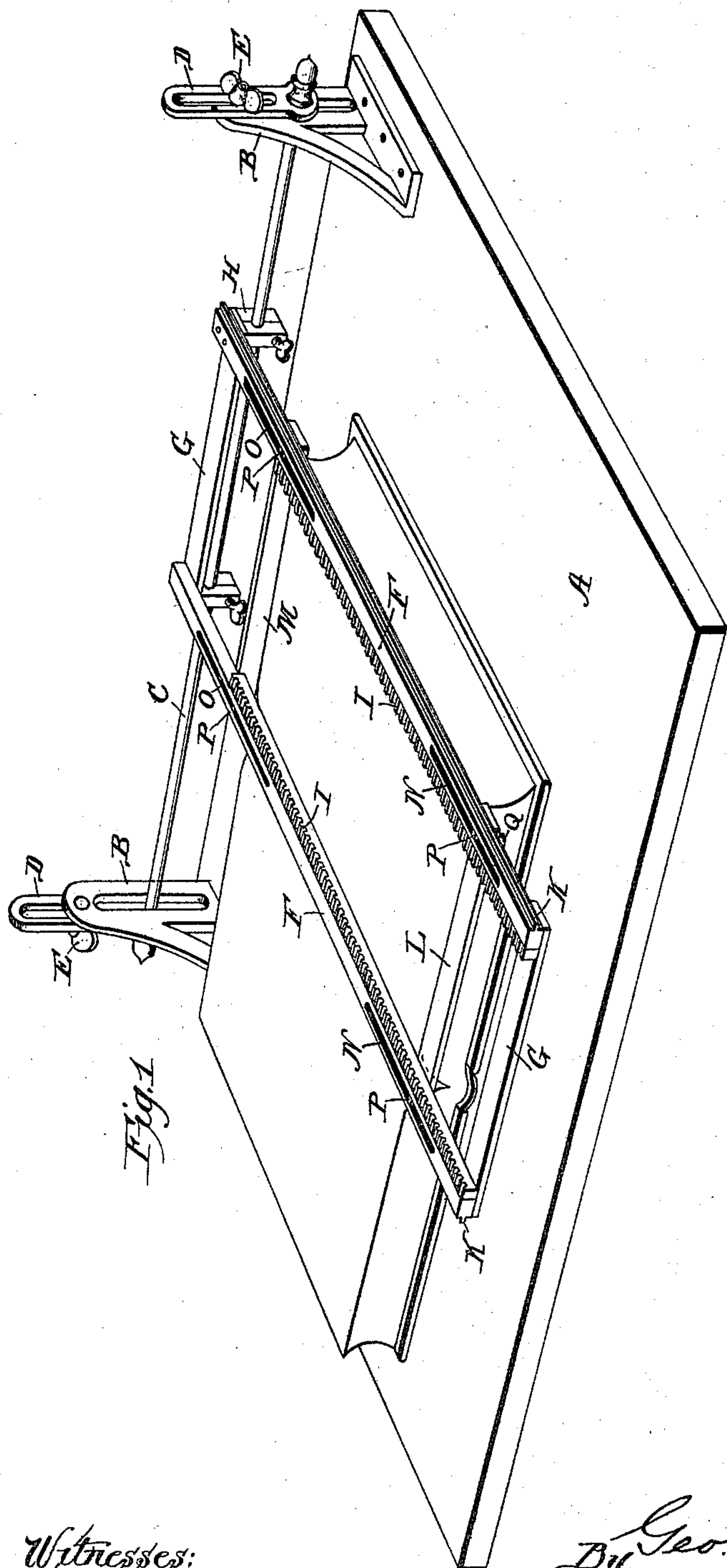
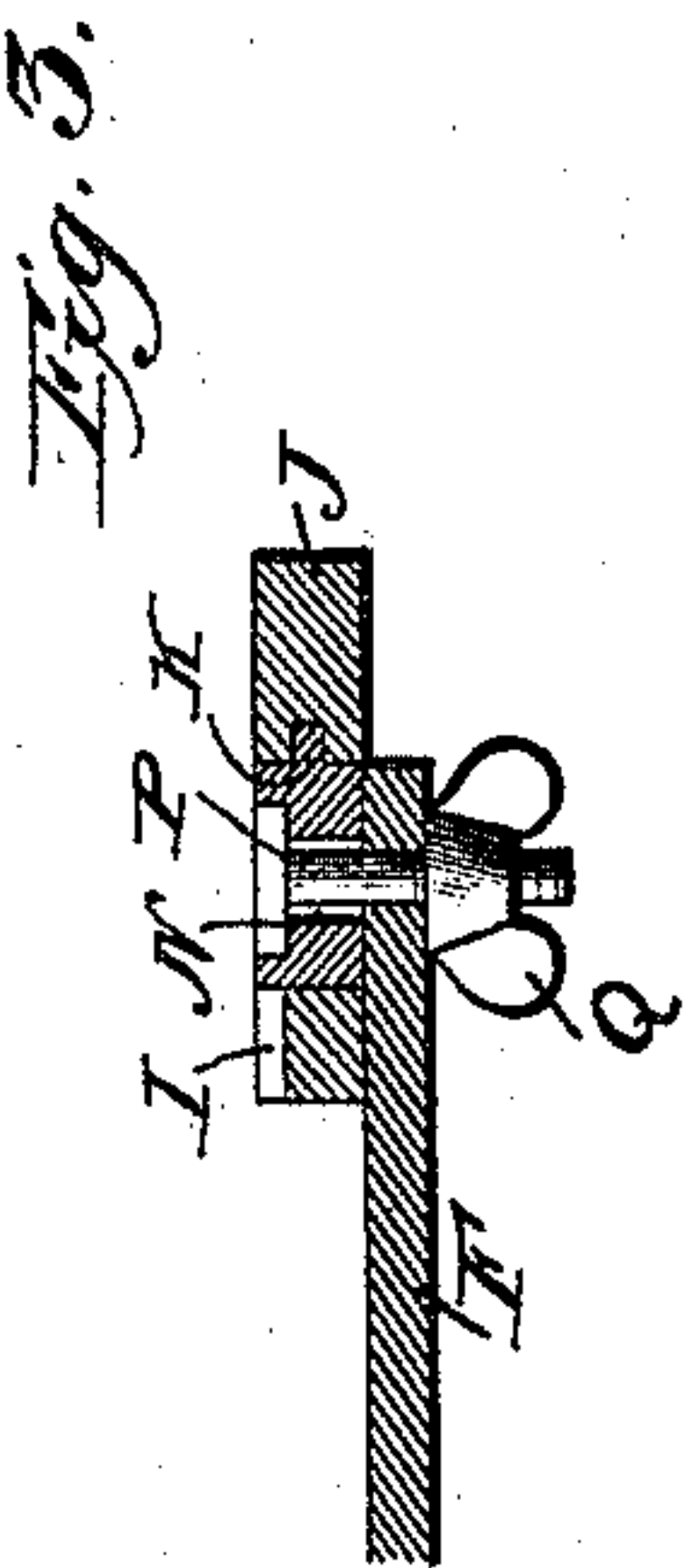
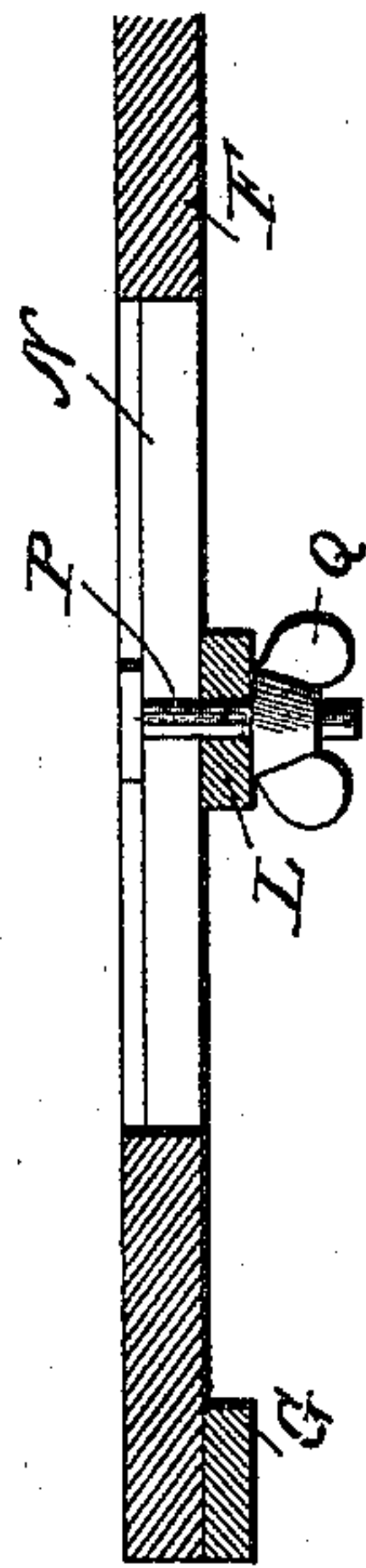


Fig. 1.

Fig. 2.



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(No Model.)

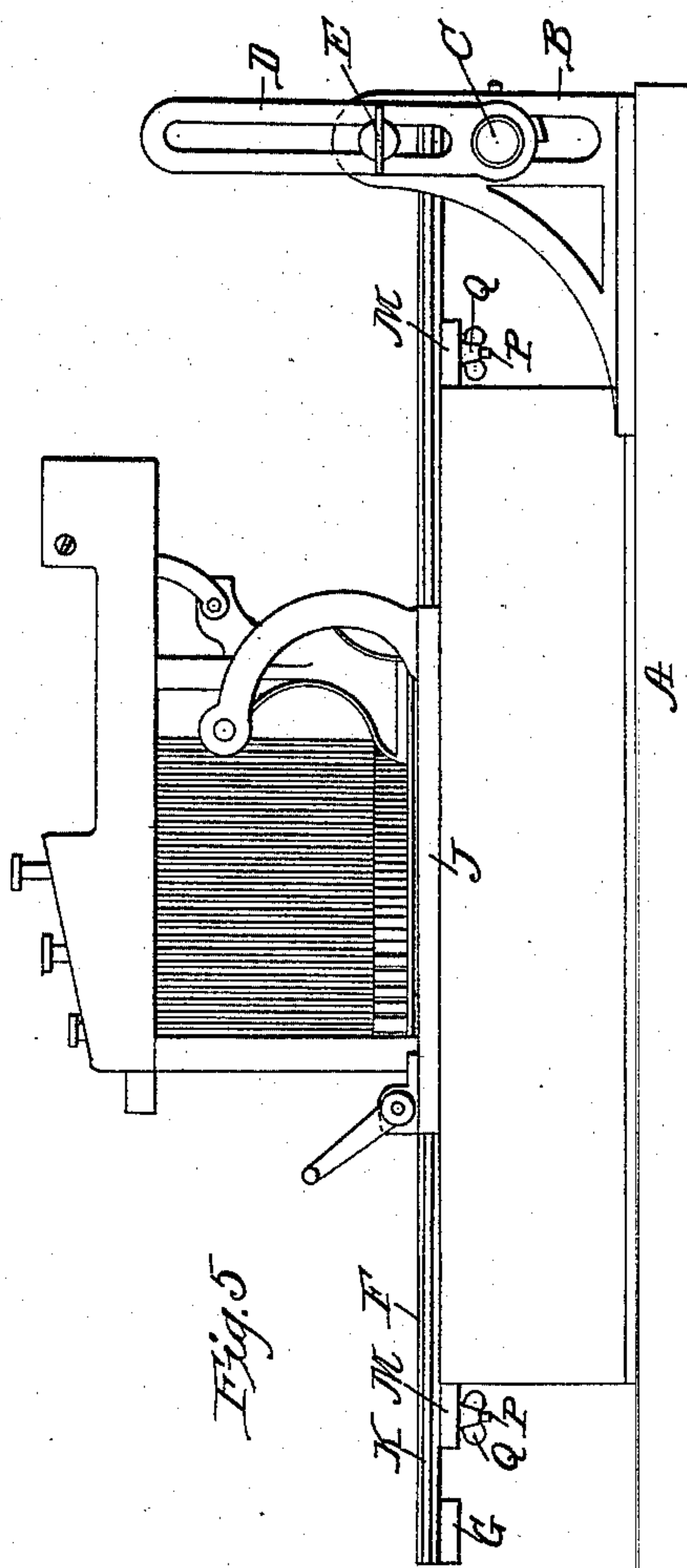
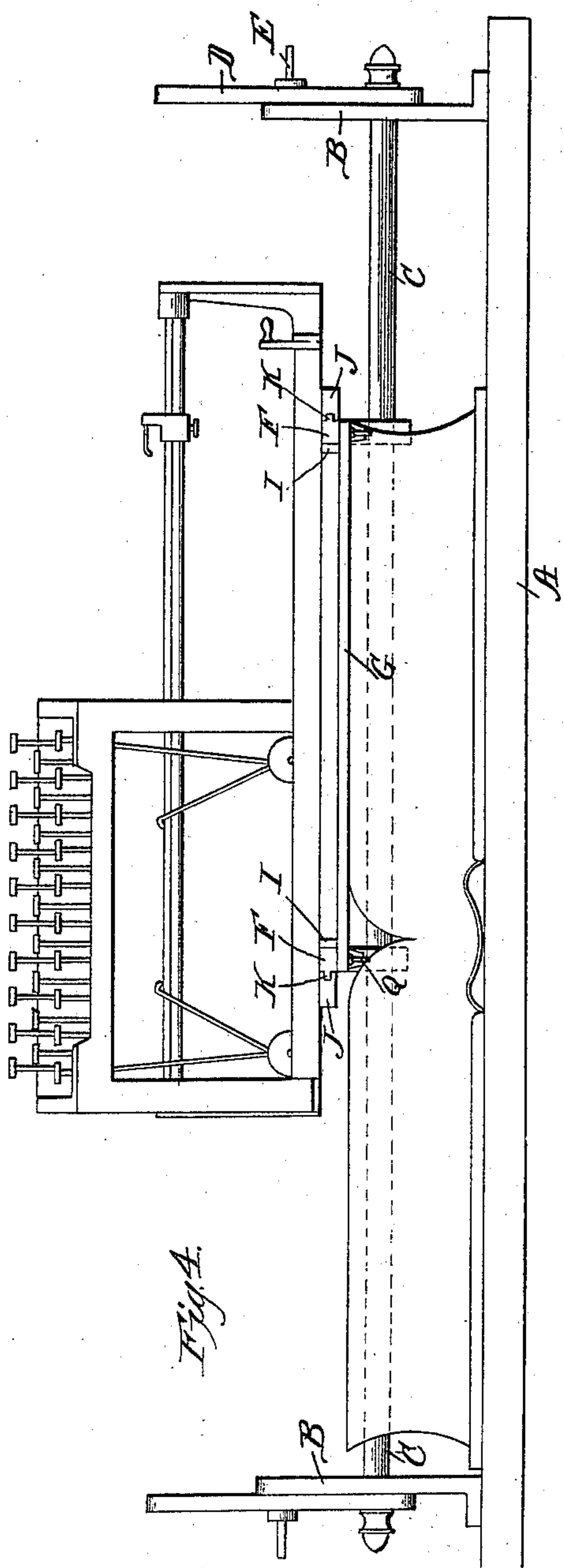
G. C. ELLIOTT.

2 Sheets—Sheet 2.

TYPE WRITING MACHINE.

No. 573,081.

Patented Dec. 15, 1896.



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UNITED STATES PATENT OFFICE.

GEORGE CRAWFORD ELLIOTT, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO W. P. HATCH, OF NEW YORK, N. Y.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 573,081, dated December 15, 1896.

Application filed December 20, 1890. Renewed May 21, 1896. Serial No. 592,486. (No model.)

To all whom it may concern:

Be it known that I, GEORGE CRAWFORD ELLIOTT, of Chicago, county of Cook, and State of Illinois, have invented a new and useful
5 Improvement in Type-Writer Attachments, of which the following is a specification.

This invention relates to improvements in type-writer attachments for use in connection with that class of type-writers known as
10 "overboard machines," especially designed for writing on bound books, piles of unbound leaves, and other flat surfaces, the type striking downward on the paper or book, which remains stationary while the type and machine move in relation thereto.
15

With this class of machines great difficulty has been encountered in holding the writing-machine firmly upon the book or other flat surface, and in a generally fixed relation thereto,
20 so as to have the space between the lines equidistant and the lines parallel, while at the same time permitting the machine to be raised from so as to expose the page being written upon, as well as to enable the printing of letters or figures in properly-aligned perpendicular columns.
25

The prime object of this invention is to overcome these difficulties in a simple, yet effective manner, not only holding the writing-machine rigidly in position while in operation,
30 but also maintaining a generally fixed relation between the machine and the book or other flat surface being written upon.

Another object is to have the attachment
35 of such character as to be readily adjustable to books and the like of varying dimensions, so that the same machine may be employed for operating upon such differing books and other flat surfaces, providing for all necessary
40 changes by the simplest means adapted to be quickly and accurately adjusted.

I attain these objects by the devices illustrated in the accompanying drawings, which form a part of this specification.

45 In the drawings, Figure 1 represents a perspective view of an attachment embodying my invention in its operative position upon a book, but with the type-writing machine removed; Figs. 2 and 3, detail longitudinal
50 and transverse sections, respectively, through the adjustable bars and rigid frame of the at-

tachment; Fig. 4, a front elevation of the attachment, showing the same in its operative relation to a book and machine; and Fig. 5, a side elevation of the same.

Similar letters of reference refer to the same parts in the several figures of the drawings.

Referring by letter to the accompanying drawings, A indicates a base-board or table, B a pair of upright slotted standards rigidly
60 secured at opposite ends of the table near the back or upper edge thereof, and C a guide-rod working loosely through the slots in the standards and journaled at its ends, respectively, in the lower ends of slides D, which
65 are slotted longitudinally for the passage of thumb-screws E, entering screw-threaded sockets in the upper ends of the standards B. By means of these devices the guide-rod may
70 be adjusted vertically in the standards and may be rigidly secured at any point of its adjustment, and yet in all its adjustments be free to turn or rock.

To the guide-rod is adjustably and slid-
75 ingly secured a rectangular frame comprising the side bars F and end bars G, one of which latter is provided with bearings H, sleeved upon the guide-rod, which may be slitted and thumb-screwed, as shown in the drawings, to
80 clamp and hold the guide-rod or otherwise slidably and adjustably engage with said rod, so that it may be slid along and adjusted thereon at any desired point, and yet be rigidly secured at any point of its adjustment
85 to the rod, so as to compel the latter to rotate therewith whenever the opposite end of the frame is elevated or lowered.

The side bars F of the frame are provided with racks I along their inner edges, which are engaged by pinions upon the frame J of
90 the type-writing machine for the purpose of moving the machine longitudinally of the rectangular frame in spacing the lines. The side bars F are also provided on their outer edges with tongues K, working in grooves on
95 the frame J of the machine or some equivalent sliding connection which serves as a guide for the machine in its movements up and down over the surface of the book or other flat surface being written upon. To
100 the rectangular frame is also adjustably secured the bars L and M, so that they may be

moved longitudinally of the frame in any suitable manner, such as by means of the slots N O, in which work the heads of the screws P, the threaded ends of which project
5 through the bars L and M and are provided with thumb-nuts Q, by means of which the adjustable-bars L and M may be rigidly clamped to the side bars F of the rectangular frame.

10 It will of course be understood that the means for adjusting the bars L and M shown in the drawings and above described is but one of the many mechanical contrivances for accomplishing this purpose which would
15 readily suggest themselves to a skilled mechanic.

The purpose of the adjustable bars is to embrace or bear against the upper and lower edges of the book or other flat surface being
20 written upon, so as to hold the same in fixed relation to the rectangular frame, in which work they are materially assisted by the weight of the machine which rests upon the rectangular frame and therefore indirectly
25 upon the book.

It will be understood that in the class of type-writers with which my attachment is designed to be used the type-carriage has the same lateral travel, letter by letter, as the
30 ordinary type-writer, and is pivoted so that it may be elevated for the purpose of disposing the page being written upon, while the line for line-spacing is obtained in the manner previously described by a bodily move-
35 ment of the type-writing machine up and down the page, which movement is obtained by a rack-and-pinion connection between the base-frame of the machine and the rectangular frame of my attachment, the pivotal
40 support of the rectangular frame at one end thereof providing for the elevation of the machine for the purpose of removing and replacing the book readily and with accuracy.

In practice it will be found preferable to
45 shift the book from one side to the other, so as to bring the different pages thereof under the machine, such manipulation being generally more quickly and less laboriously performed; but in the case of very large books
50 or for other reasons it may be desirable to shift the machine, in which event the adjustable and sliding connection between the rectangular frame and the guide-rod C thereof provides for such manipulation.

55 The rectangular or supplemental frame is designed to be of such dimensions as to be capable of use in connection with the average sizes of books; but where unusually large books are to be written upon it will of course
60 be necessary to provide a larger rectangular or supplemental frame and also to enlarge the base-frame of the machine.

From the foregoing it will be seen that the rectangular or supplemental frame with its
65 adjustable bars and attaching devices to the guide-rod may be moved along or held stationary upon the guide-rod or swung upon

said rod as a pivot, thus providing for the various adjustments and movements thereof
70 from page to page of the book and the removal and replacement of the book, which it may be readily adjusted to fit and hold in fixed relation thereto, besides which the guide-rod may be elevated or lowered in the slotted
75 brackets for the purpose of adjusting the machine to books varying in thickness. The entire writing-machine is therefore held firmly in any desired position for work, and yet can be easily shifted to any other required
80 position, laterally, longitudinally, or altitudinally, and also relatively to the thickness and length of books or other surfaces upon which the writing is being done. Furthermore, the machine can be raised, lowered, or
85 transferred to opposite pages of the book and then retransferred back to the identical point with convenience and accuracy.

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

1. The combination with an overboard type-writing machine of a supplemental frame having a sliding connection with said machine and a vertically-adjustable pivotal support for said frame at one end thereof only, said
95 frame being horizontally adjustable upon said support, substantially as described.

2. The combination with an overboard type-writing machine of a supplemental frame having a longitudinally-sliding connection
100 with said machine, a transverse pivotal support for said frame at one end thereof only, and transverse adjustable bars on said frame near the ends thereof respectively, for engaging the upper and lower edges of a book
105 or like object, substantially as described.

3. The combination with an overboard type-writing machine, of a supplemental frame having a longitudinally-sliding connection
110 therewith, a transverse vertically-adjustable pivotal support for said frame at one end thereof only, and transverse, adjustable bars on said frame near the ends thereof respectively for engaging the upper and lower edges of a book or like object, substantially as de-
115 scribed.

4. The combination with an overboard type-writing machine of a supplemental frame having a sliding connection with said machine, said frame being horizontally adjust-
120 able on its pivotal support, and transverse adjustable bars on the frame near the ends thereof respectively for engaging the upper and lower edges of a book or like object, substantially as described.

5. The combination with an overboard type-writing machine and a supplemental frame having a sliding connection therewith, of a pivotal guide-rod to which one end of said
130 frame is secured, and vertically-adjustable journal-bearings for the ends of said rod, substantially as described.

6. The combination with an overboard type-writing machine and a supplemental frame

having a sliding connection therewith, of a pivotal guide-rod, a table, standards thereon, and journal-bearings for said rod adjustably and slidingly connected with said standards, substantially as described.

7. The combination with an overboard type-writing machine and a supplemental frame having a sliding connection therewith of a guide-rod to which one end of said frame is secured, a table, slotted standards secured thereto through which the ends of said rod freely work, slotted slides in which the ends

of said rod are journaled, and set-screws working through the slots in the slides and engaging the standards, substantially as described.

In testimony whereof I have hereunto set my hand, in presence of two witnesses, this 24th day of July, A. D. 1890.

GEORGE CRAWFORD ELLIOTT.

Witnesses:

A. J. SPARKS,
JOHN CONLEY.