(No Model.) 2 Sheets—Sheet 1.

J. T. DAVIS.

TYPE WRITING MACHINE.

No. 458,522. Patented Aug. 25, 1891.

Fig. I.

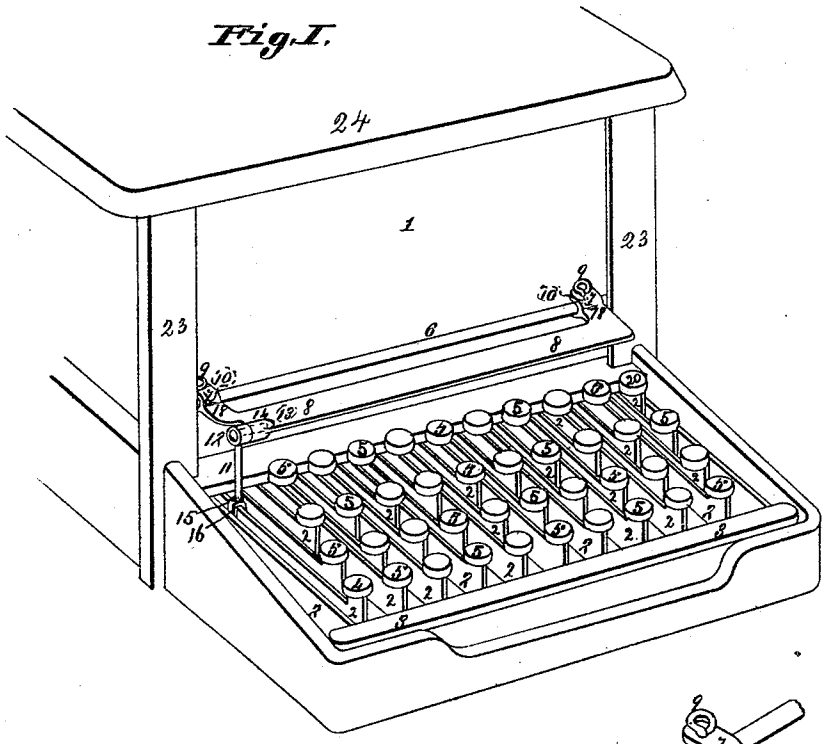
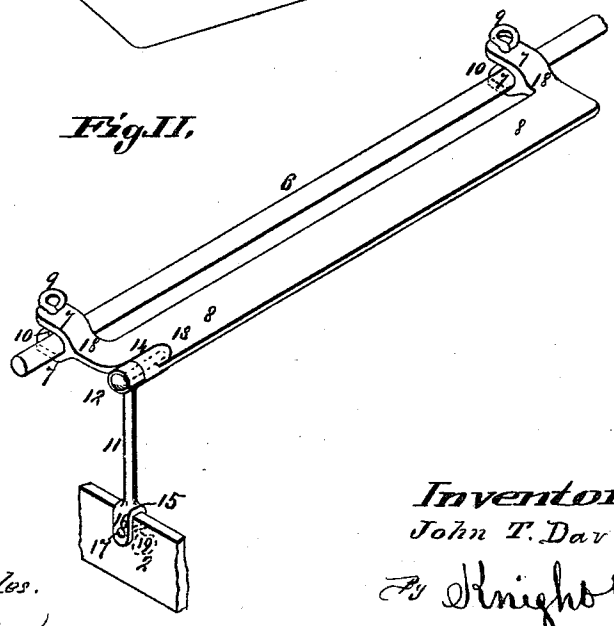


Fig. II.



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By Knight Bros.
Atty's.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

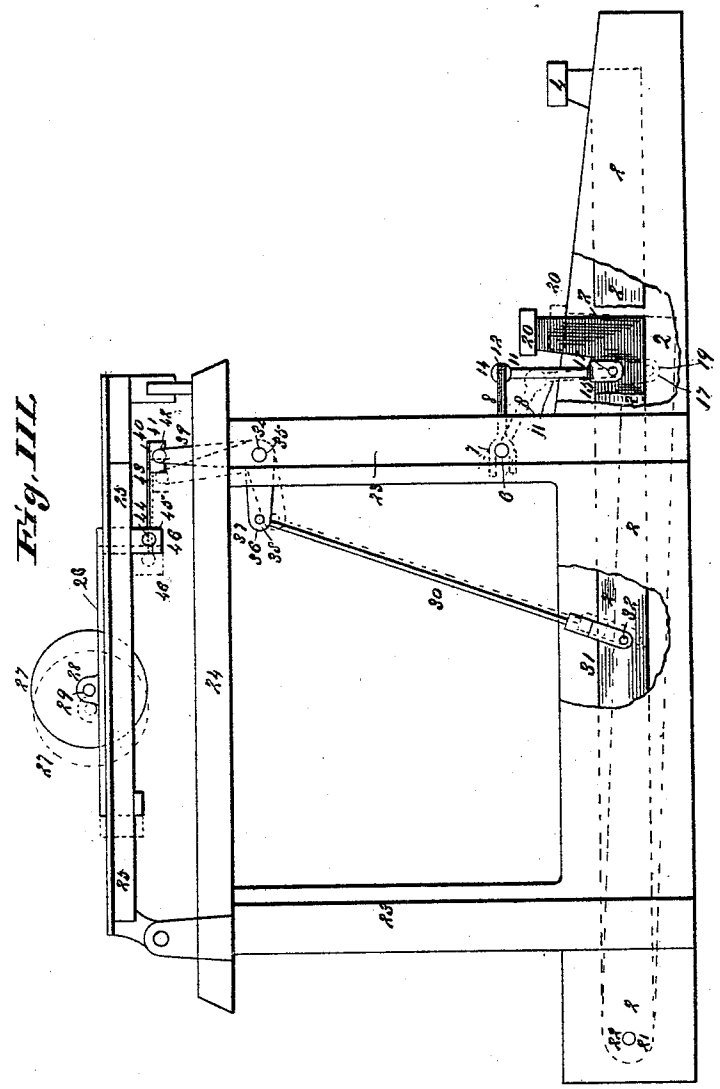
(No Model.) 2 Sheets—Sheet 2.

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Fig. III.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN T. DAVIS, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO CHARLES J. MOFFETT, OF SAME PLACE.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 458,522, dated August 25, 1891.

Application filed April 5, 1890. Serial No. 346,640. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. DAVIS, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Type-Writing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a horizontal shift-key bar for controlling the side movement of the carriage of a type-writing machine in writing upper-case letters, the said key-bar reaching, as it does, from side to side of the key-board, and the saddle of its pendent operating-rod mounted on the key-lever that controls the upper-case movement. It thus provides a facile tap key-bar that is easy of approach, whatever be the previous position of the hand over the key-board; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, Figure I is a perspective view of a portion of a type-writing machine provided with my improvement. Fig. II is a perspective view of the shift key-bar detached from the machine. Fig. III is a side elevation of a portion of a machine, portions being broken away to exhibit that in the rear thereof.

1 represents a type-writer in which the action of the keys can be set, respectively, to control the movement of the carriage to the writing of either upper or lower case letters, whether a capital or upper-case letter on the one hand or a small or lower-case letter on the other hand is required.

2 represents the key-levers; 3, the spacer-bar, which is mounted on the two outside key-levers. 4 are the upper-case keys mounted on the next adjacent key-levers, and 5 are the letter, stop, and character keys that are mounted on the residue of the key-levers.

6 represents the transverse front rod, and 7 are the bifurcated clips on the attachment arms 18 of the elongated shift key-bar 8, which clips 7 embrace and pivot on said rod 6, and 9 are key-pins which are screw-threaded or otherwise and which are seated in the perforations 10 in said arms beyond the rod 6, by which means said shift key-bar is held to said rod 6, on which it pivots when tapped by the hand of the operator, when an upper case—that is, a capital—letter is required to be impressed.

11 represents a vertical pendent operating-rod in whose perforate head the pivot screw-pin 12 is seated, whose screw-tip engages in its screw-socket seat 13 within the swell 14 at the left-hand front corner of said shift key-bar 8.

15 represents the pendent saddle at the foot of the rod 11, which saddle is mounted on one of the key-levers 2, that controls the side movement of the carriage in writing upper-case or capital letters, and 16 are the flaps or bifurcated clip-arms of said saddle, which embrace each side of said upper-case key-lever, to which it is secured by the pivot screw or rivet 17, that passes through and is secured in the perforation 19 in said clip-arms, and said key-lever or said saddle can ride loosely. 20 is the lower-case key.

Now, it is common with type-writers to provide either a spacer-bar, as indicated by the numeral 3 in the drawings, in front of the type-keys, or else two bars on the sides of the key-board, in either case so as to be convenient to the hand of the operator wheresoever over the key-board said hand may at the time be traveling, so as to facilitate the passage of the hand from the letter-keys to the spacer; but no such conveniently-located device is provided for working the transfer to the upper-case or capital letters.

My horizontal key-bar extends across in front of the machine over the key-board just back of the type-keys, as above described, and may be depressed by either hand when an upper-case letter—that is, a capital letter—is desired, for at the time of the depression its pendent saddle-rod depresses the key-lever that controls the movement of the carriage in writing upper-case letters. By this action is obviated the necessity of crossing the right hand to the left-hand side of the key-board when a capital letter is required, and both speed and convenience to the operator are thus gained. In the use of this attachment either hand may be used to shift the carriage sidewise in printing capital letters.

I have shown and described my shift key-

bar 8, with the saddle 15, carried by the rod 11, which hangs pendent from said key-bar 8, mounted on the key-lever which carries the key 4, that controls the upper-case carriage next the spacer key-lever on the left-hand side of the key-board; but I do not confine myself to said position of said parts, for sometimes it is desired to adjust the normal condition of the machine to write upper-case letters, in which case I merely reverse the shift key-bar, as shown in Fig. III, end for end and mount the saddle 15 on the lower-case key-lever which carries the key 20 next the right-hand spacer key-lever, when it will be evident that as in the former-described case by the depression of said key-bar the action of the carriage is changed from lower to upper case, so now by the reversal of the key-bar (the normal set of the machine being also reversed to upper case) the effect is to remove it from its then normal position to lower case. The upper and lower case key-levers are pivoted by a rod 21, having bearings 22 in the base-frame, whose vertical posts 23 support the table 24. The table is surmounted by a carriage 25, in which the platen-carriage 26 slides sidewise.

27 is the platen, having journals 28 running in boxes 29 on the platen-carriage.

30 represents a connecting-rod whose bifurcated lower end 31 straddles the key-lever and is secured thereto by a pin 32.

33 is a bell-crank lever mounted on the rod 34, which has journal-bearings 35, in the forward posts 23 of the frame. A pin 36 connects the upper end of the rod 30 with the end 37 of the bell-crank lever, in which it has bearing 38. The other end 39 of the bell-crank lever has a bearing 40, in which and in the journal-box 41 is mounted the pin 42. A strap 43 connects the journal-box 41 to the rod 44 of the platen-carriage. When the platen-carriage is to be shifted either toward the front or toward the rear of the machine by either the upper or lower case key-lever, as the case may be, the depression of the key-bar will depress the key-lever with which the saddle-bar connects and shift the platen-carriage to the position shown in dotted lines in Fig. III.

I claim as my invention—

1. The combination, with the case key-lever, of the shift key-bar pivoted to the frame of the type-writing machine and connected to said key-lever, substantially as described.

2. The combination, with the key-lever, of the carriage-shifting mechanism of the shift key-bar pivoted to the frame in rear of the keys and connected to said key-lever, substantially as described.

3. The combination of the frame, the pivot-rod, the shift key-bar having clips, the pendent rod, and the case key-lever, substantially as described.

4. The combination of the frame, the pivot-rod, the shift key-bar having arms formed with clips, the key-pins, the pendent rod, and the case key-lever, substantially as described.

5. The combination of the frame, the pivot-rod, the shift key-bar secured to said rod, the pendent rod, pin by which the pendent rod is secured to the key-bar, and the case key-lever, substantially as described.

6. The combination of the frame, the pivot-rod, the shift key-bar secured to said rod, having head 14, the pendent rod 11, having saddle 15 and clips 16, the case key-lever, and the pivot-pins 12 and 17, substantially as described.

7. The case key-lever attachment, substantially as described, consisting of the pivot-rod 10, shift key-bar 8, having arms 18, clips 7, and head 14, the key-pins 9, the pendent rod 11, having saddle 15 and clips 16, and the pivot-pins 12 and 17, substantially as described.

JOHN T. DAVIS.

In presence of—
BENJN. A. KNIGHT,
THOMAS KNIGHT.