(No Model.)

G. W. BALDRIGE.

KEY BOARD FOR TYPE WRITING MACHINES.

No. 345,565. Patented July 13, 1886.

FIG. I.

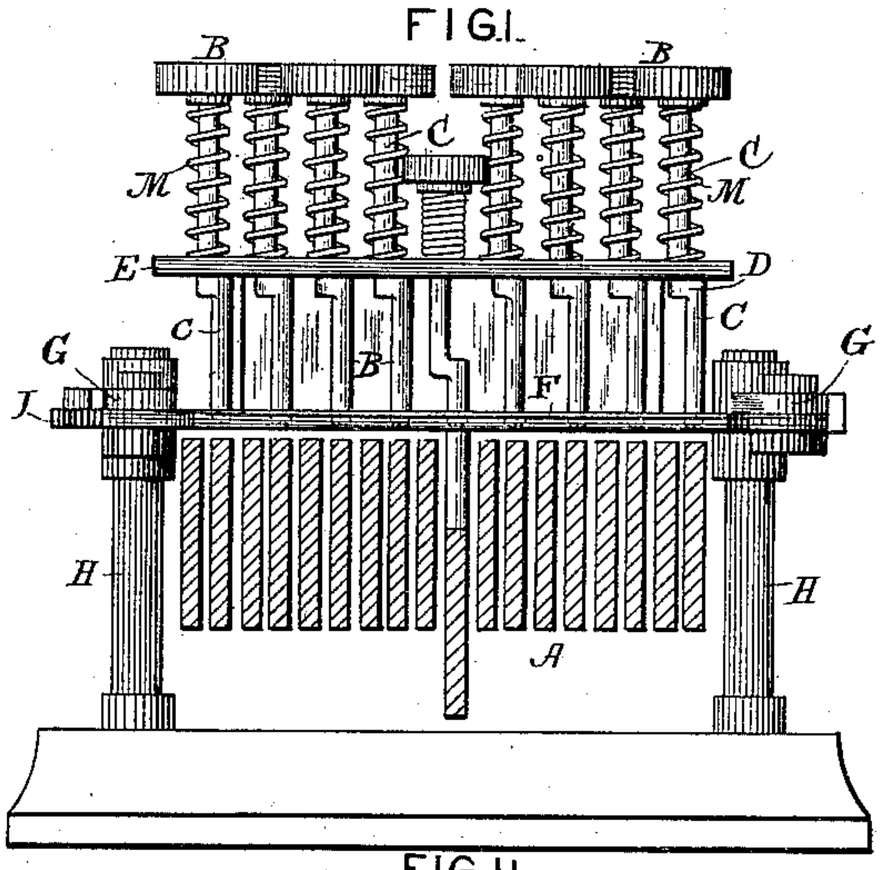


FIG. III.

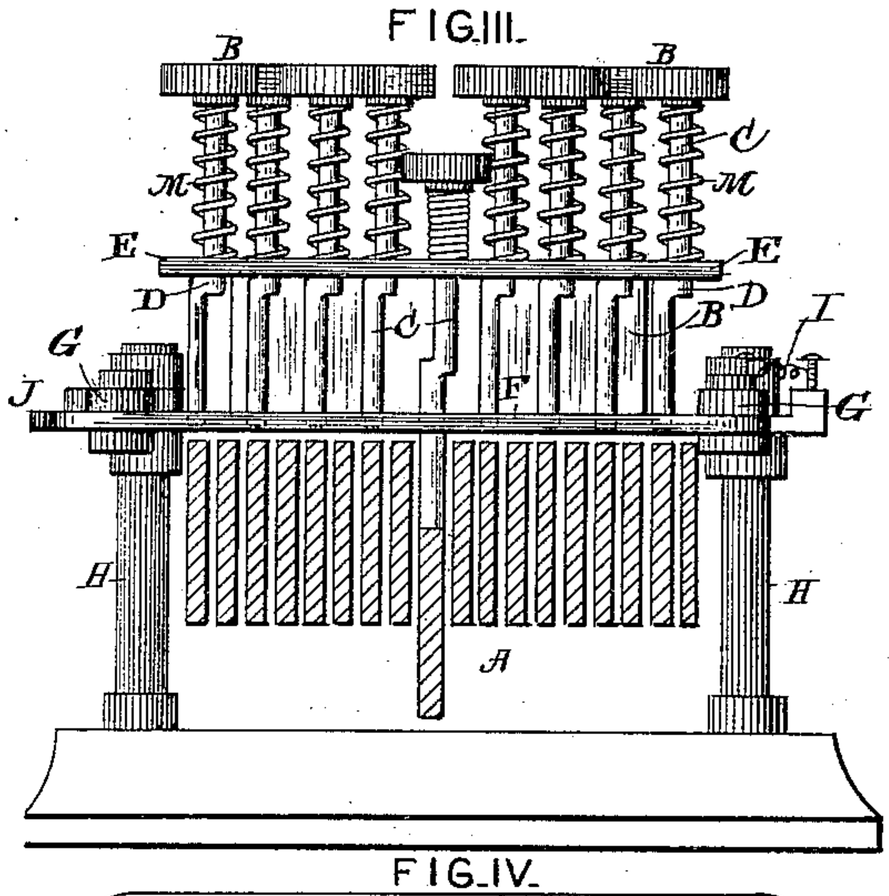


FIG. II.

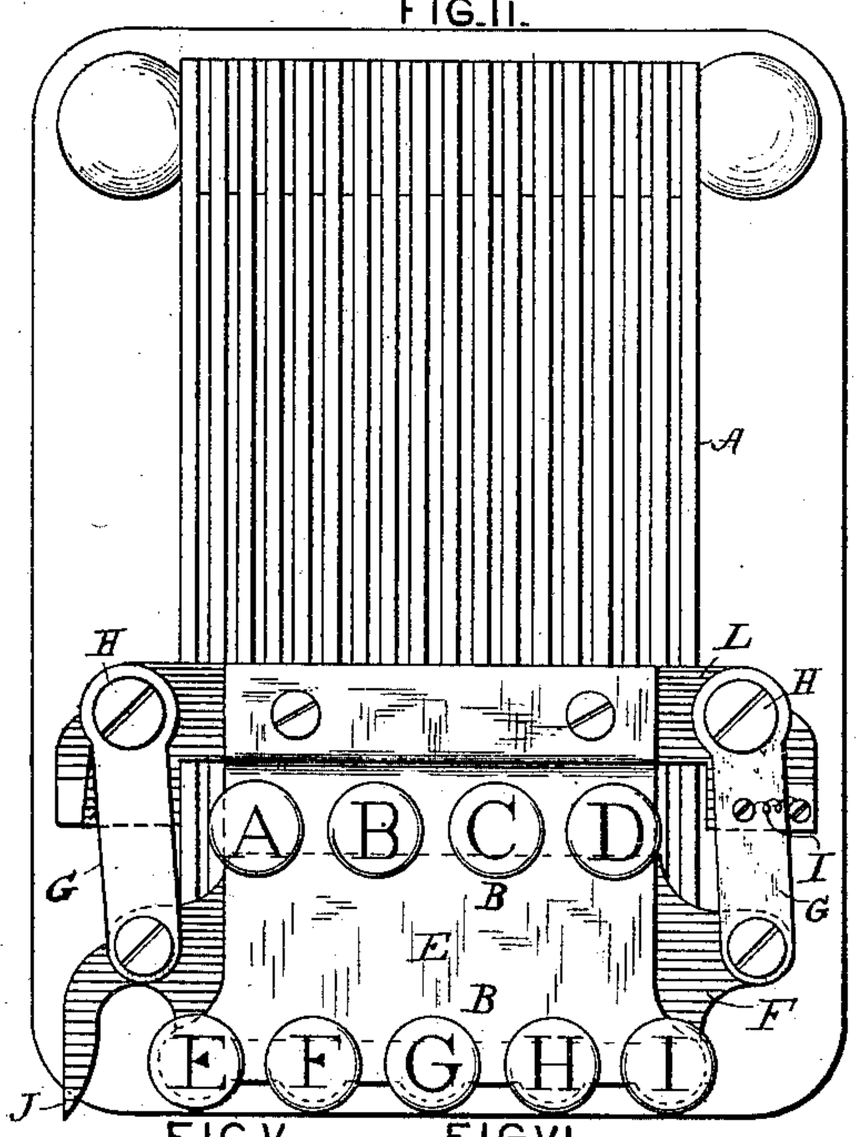


FIG. IV.

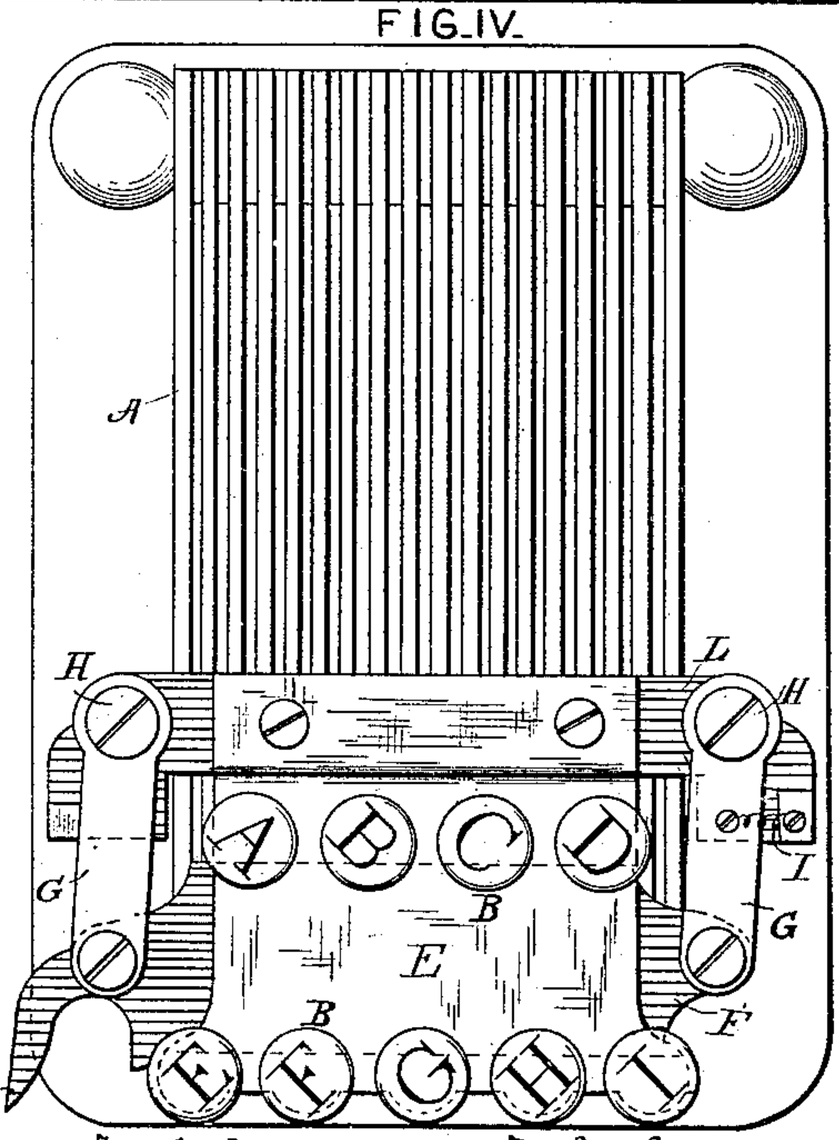


FIG. V.

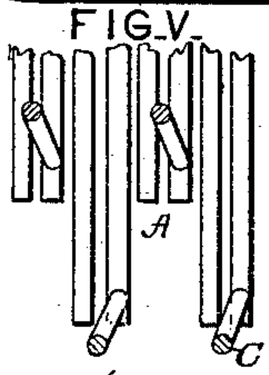


FIG. VI.

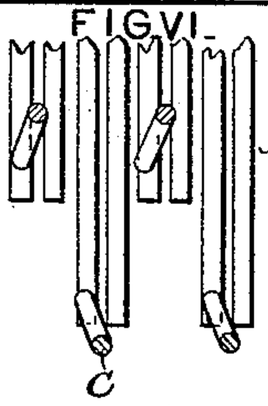


FIG. VII.

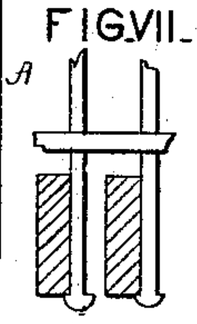


FIG. VIII.

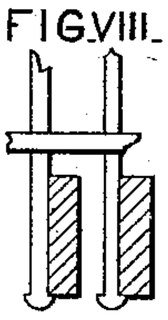


FIG. IX.

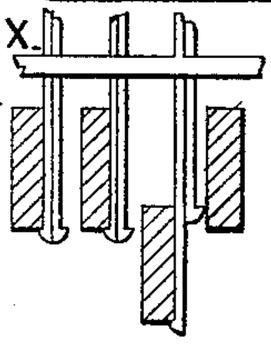


FIG. X.

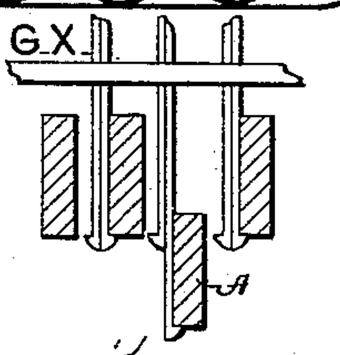


FIG. XI.

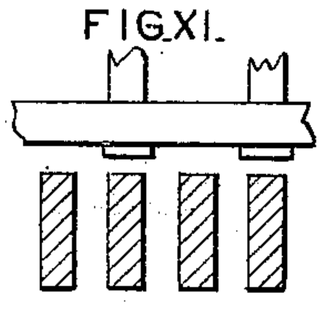
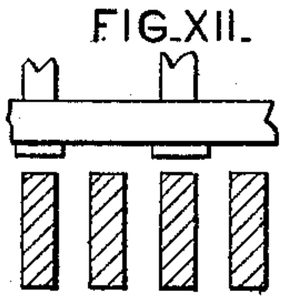


FIG. XII.



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By Knight Bros.
Attys

UNITED STATES PATENT OFFICE.

GEORGE W. BALDRIGE, OF ST. LOUIS, MISSOURI.

KEY-BOARD FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 345,565, dated July 13, 1886.

Application filed April 9, 1886. Serial No. 198,367. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BALDRIGE, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Key-Boards for 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, and in which—

Figure I is a front elevation of my improved machine, the keys being in section. Fig. II is a top view. Fig. III is a front elevation, the keys being in vertical section. Fig. IV is a top view showing the finger-pieces turned to operate a different set of keys from that shown in Fig. II. Fig. V is a detail view showing the stems of the finger-pieces in the position shown in Figs. I and II. Fig. VI is a similar view showing the stems of the finger-pieces in the position shown in Figs. III and IV. Figs. VII, VIII, IX, X, XI, and XII illustrate modified forms of my preferred construction.

My invention relates to an improvement that may be applied to type-writers, mechanical telegraph-transmitters, or other finger-piece instruments, whereby one key may be used to operate more than one letter or character; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, A represents the keys of a type-writer or telegraph-transmitter, and B represents the finger-pieces having stems C. The keys are connected to the levers of the type-writer by wires in any well-known manner. Each stem C is bent at D, and all the stems are supported by an upper stationary plate, E, and a lower movable plate, F. This latter plate is pivoted by links G to posts H, and is held over into the position shown in Figs. I and II by a suitable spring, I, connecting one of the links G to a stationary part of the framing, as shown in Figs. II and IV. When in this position, the stems of the finger-pieces strike one set of keys—say the keys of the lower-case type—and when it is desired to print an upper-case type the plate F may be moved from the position shown in Figs. I and II to that shown in Figs. III and IV by pressing against a suitable horn or projection, J, when the stems of the finger-pieces will be turned from the position shown in Figs. I and V to that shown in Figs. III and VI, and will be over the keys of the upper-case type, so that on the depression of one of the finger-pieces an upper-case letter will be printed. As soon as the pressure is removed from the horn J the plate F and the stems of the finger-pieces will be turned back to their normal position, and a lower-case character will be produced upon the operation of a finger-piece. I have shown the plate E bent downward and secured by its lower inner end to a cross-piece, L, supported by the posts H.

It will be seen that the lower-case letters or characters may be operated without shifting or turning the finger-pieces, and when a capital or upper-case character is to be printed the finger-pieces are shifted or turned as described. The stems of the finger-pieces are surrounded by springs M, by which the finger-pieces are raised to their normal position after being operated.

In the modification shown in Figs. VII and VIII there are projections formed upon the rods making the connections between the keys and the type-carrying levers, and by shifting these rods one key may be made to operate either one of two levers. In Figs. IX and X a similar arrangement is shown, except that instead of the rods being in one piece with a double or T-head they are formed in separate pieces with a half on each. In Figs. XI and XII a similar arrangement to my preferred form is shown, except that instead of shifting or turning the finger-pieces of the keys the keys themselves are shifted. It will thus be seen, with the arrangement I have shown, that the upper and lower case of all the keys may be operated with just half the number of finger-pieces that there are keys, and the method I have shown of accomplishing this result is cheap, durable, and effectual.

I claim as my invention—

1. In a type-writer or similar machine, a set of finger-pieces having bent stems and adapted to be turned to operate the upper or lower case keys, as specified.

2. In a type-writer or similar machine, the finger-pieces provided with stems bent at D, a

plate for turning said stems, and finger-pieces to operate the upper and lower case keys, as described.

3. In a type-writer or similar machine, turning finger-pieces, whereby either the upper or lower case keys may be operated, as described.

4. In a type-writer or similar machine, the combination of the finger-pieces provided with bent stems, fixed plate, movable plate, and keys, the movable plate adapted to turn the finger-pieces to operate either an upper or lower case key, as described.

5. In a type-writer or similar machine, the combination of the finger-pieces having bent stems, fixed plate, movable plate connected to supports by pivoted arms, spring for moving the plate in one direction, and a horn on the plate for moving it in the other direction, and keys, all arranged and operating as shown and described, for the purpose set forth.

GEORGE W. BALDRIGE.

In presence of—

GEO. H. KNIGHT,

JOS. WAHLE.