(No Model.)

G. G. PRENTICE.

TYPE WRITING MACHINE.

No. 427,609. Patented May 13, 1890.

Fig. 1.

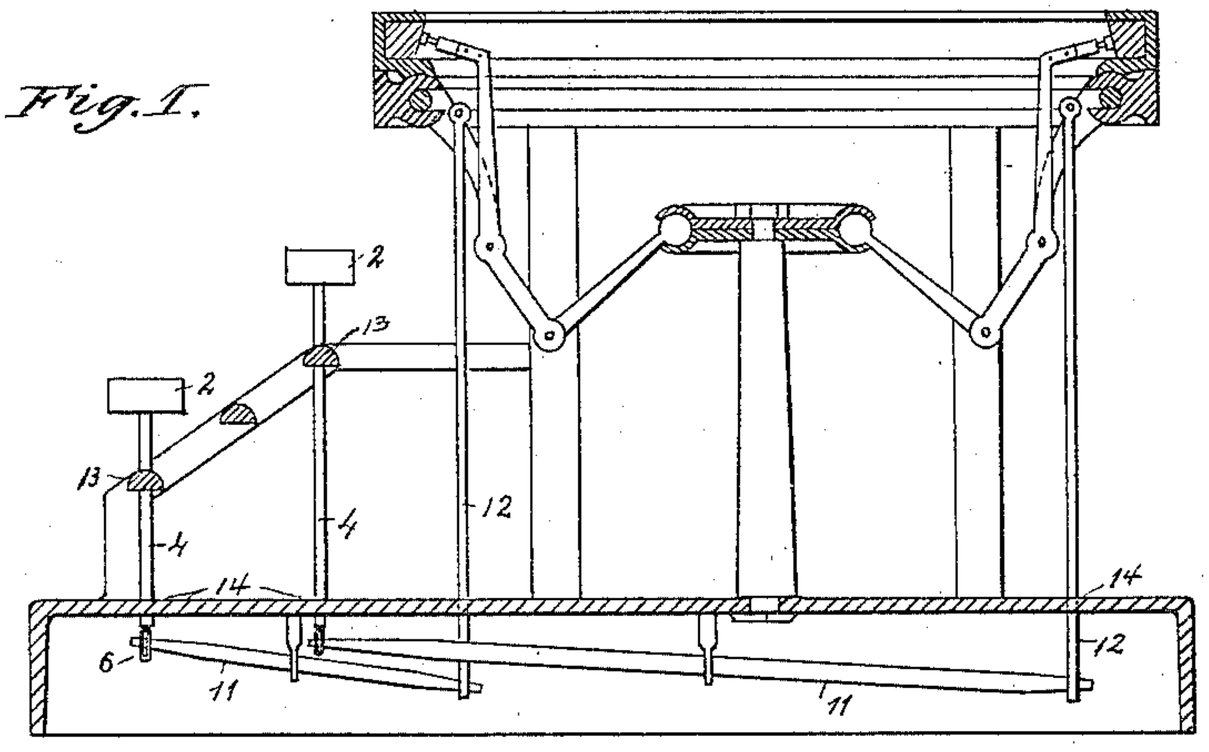


Fig. 2.

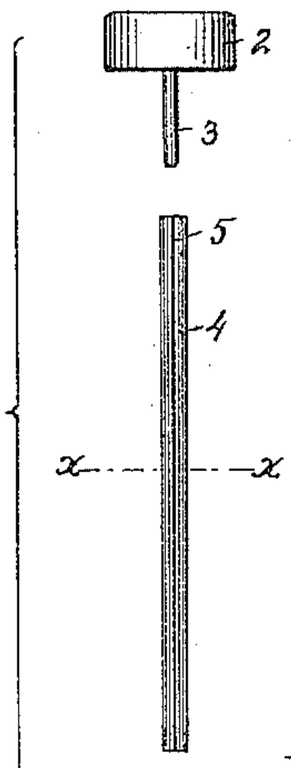


Fig. 3.

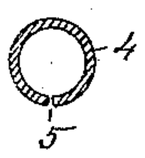


Fig. 4.

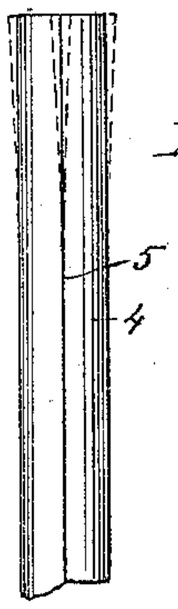


Fig. 7.

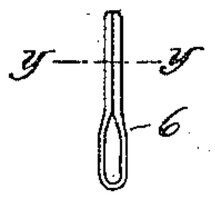


Fig. 5.

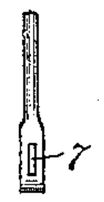


Fig. 6.

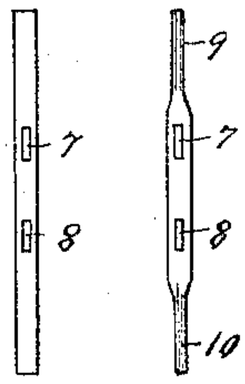
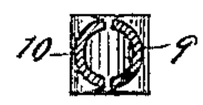


Fig. 8.



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Inventor:

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By Jacob Felbel,

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UNITED STATES PATENT OFFICE.

GEORGE GORDON PRENTICE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE YOST WRITING MACHINE COMPANY, OF NEW YORK, N. Y.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 427,609, dated May 13, 1890.

Application filed May 15, 1889. Serial No. 310,828. (No model.)

To all whom it may concern:

Be it known that I, GEORGE GORDON PRENTICE, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates more particularly to the stem or finger-keys, and has for its main objects to provide a construction whereby, first, the finger portion or head may be readily connected to its stem or support, and in a manner such as to obviate any relative turning of the parts, and by which, secondly, the key-lever may be connected to the stem or support in a simple and effective manner; and to these main ends my invention consists in the features of construction and combinations of devices hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a sectional elevation of a portion of a type-writing machine embodying my invention. Fig. 2 is an enlarged elevation showing the head or finger-piece, the stem, and the key-lever stirrup or link, one under the other and in position for assembling. Fig. 3 is an enlarged cross-section taken at the line $x\ x$ of Fig. 2. Fig. 4 is an enlarged elevation of the tubular stem or support, shown spread open at its upper end in dotted lines. Fig. 5 is a plan of the stirrup-blank. Fig. 6 is a plan of the same after having gone through the first stage of its formation into a stirrup. Fig. 7 is a front elevation of the completed stirrup. Fig. 8 is an enlarged cross-section of the same, taken at the line $y\ y$ of Fig. 2.

In the several views the same part will be found designated by the same numeral of reference.

2 designates a button-head or finger-piece, which, as usual, bears a letter, numeral, or punctuation-mark indicative of the type with which it is connected. From the head depends a shank or stud 3.

4 designates a tubular or hollow stem or support split or divided lengthwise, as indicated at 5.

6 represents the finished stirrup. This device is preferably made from a flat metal blank or strip formed or provided with two slots 7 and 8. The ends of the strip are subjected to the action of forming-dies, so as to give each a semi-cylindrical shape, as illustrated clearly at 9 and 10. The strip is then doubled or bent upon itself to bring the eyes or slots 7 and 8 in line or register. Through these eyes is passed one end of a key-lever 11, whose opposite end engages with a connecting-rod 12 of the type-movement. In assembling the parts the outer end of the lever 11 is passed through the eyes 7 and 8. Then the cylindrical shank 9 10 of the stirrup is inserted into the lower end of the tubular stem 4, which is guided or held in a vertical position by the bridge-piece 13 and perforated bed-plate 14, and finally the shank 3 of the button-head is inserted into the upper end of the hollow stem 4.

The insertion of the stirrup-legs 9 10 and the shank 3 is effected by a springing open of the ends of the tubular stem, as illustrated at Fig. 4, which may be caused by a suitable tool. I prefer, however, to round or bevel the ends of the stirrup-shank and the button-shank, so that they may spring apart the ends of the tube or stem by a wedging action. The button-shank is held in place simply by the spring or clamping action of the upper end of the split tube, and the stirrup-shank is maintained in position also by the clamping or spring gripping action of the lower end of the split tube.

I have found in practice that the gripping or clamping of the split tube is sufficient to hold the button-head or finger-piece (as well as the stirrup) firmly in place, and securely against any turning which would throw the character out of line or cause it to stand askew under the action of the fingers of the operator.

The construction, it will be seen, is cheap and simple, and the parts may be assembled or put together with great facility. They may also be readily taken apart when occasion requires.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a type-writing machine, the combi-

nation of a key-lever, a stirrup connected thereto and having semi-cylindrical ends forming a shank, and a split spring-acting cylindrical tube surrounding said shank, as set forth.

2. In a type-writing machine, the combination of a key-lever, a stem-key, and a stirrup made of a single piece bent upon itself and provided with coincident eyes 7 8 for receiving and supporting the end of the key-lever, as set forth.

3. In a type-writing machine, the combination of a key-lever, a tubular stem-key, and a stirrup having semi-cylindrical ends 9 10 entering said tubular stem-key, and having coincident eyes 7 8, receiving and supporting the end of the key-lever, as set forth.

4. In a type-writing machine, the combination of a key-lever, a split spring-acting tube, a stirrup having coincident eyes 7 8, receiving and supporting the key-lever and having a shank entering the lower end of the split, spring-acting tube, and a finger-button or head having a shank entering the upper end of said split spring-acting tube, as set forth.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 10th day of May, A. D. 1889.

GEO. GORDON PRENTICE.

Witnesses:
S. H. HUBBARD,
H. T. SHELTON, Jr.