

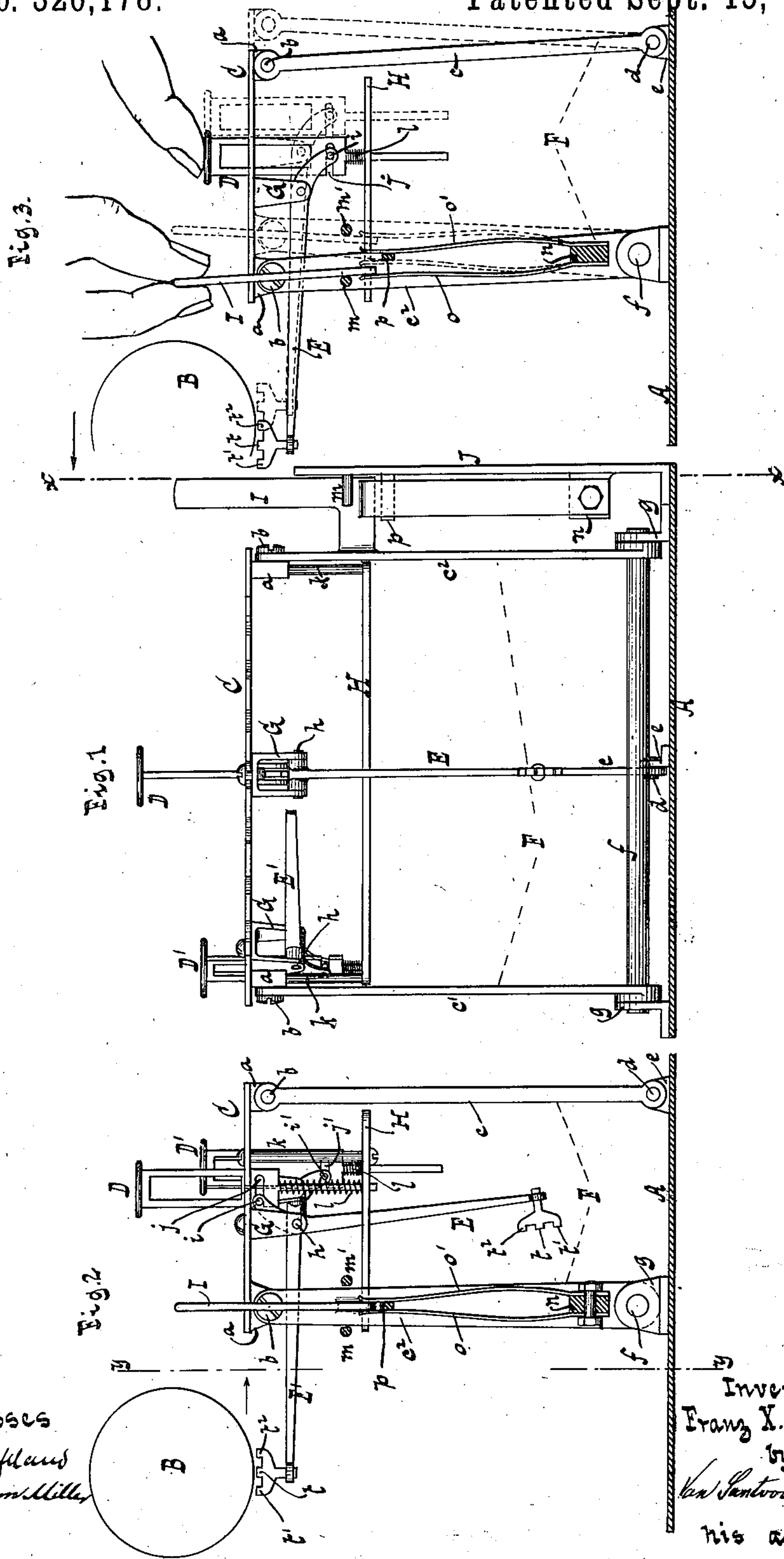
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3 Sheets—Sheet 1.

F. X. WAGNER.
TYPE WRITING MACHINE.

No. 326,178.

Patented Sept. 15, 1885.



Witnesses
Otto Hupfand
William Miller

Inventor
Franz X. Wagner
by
Van Santvoord & Hauff
his att'ys

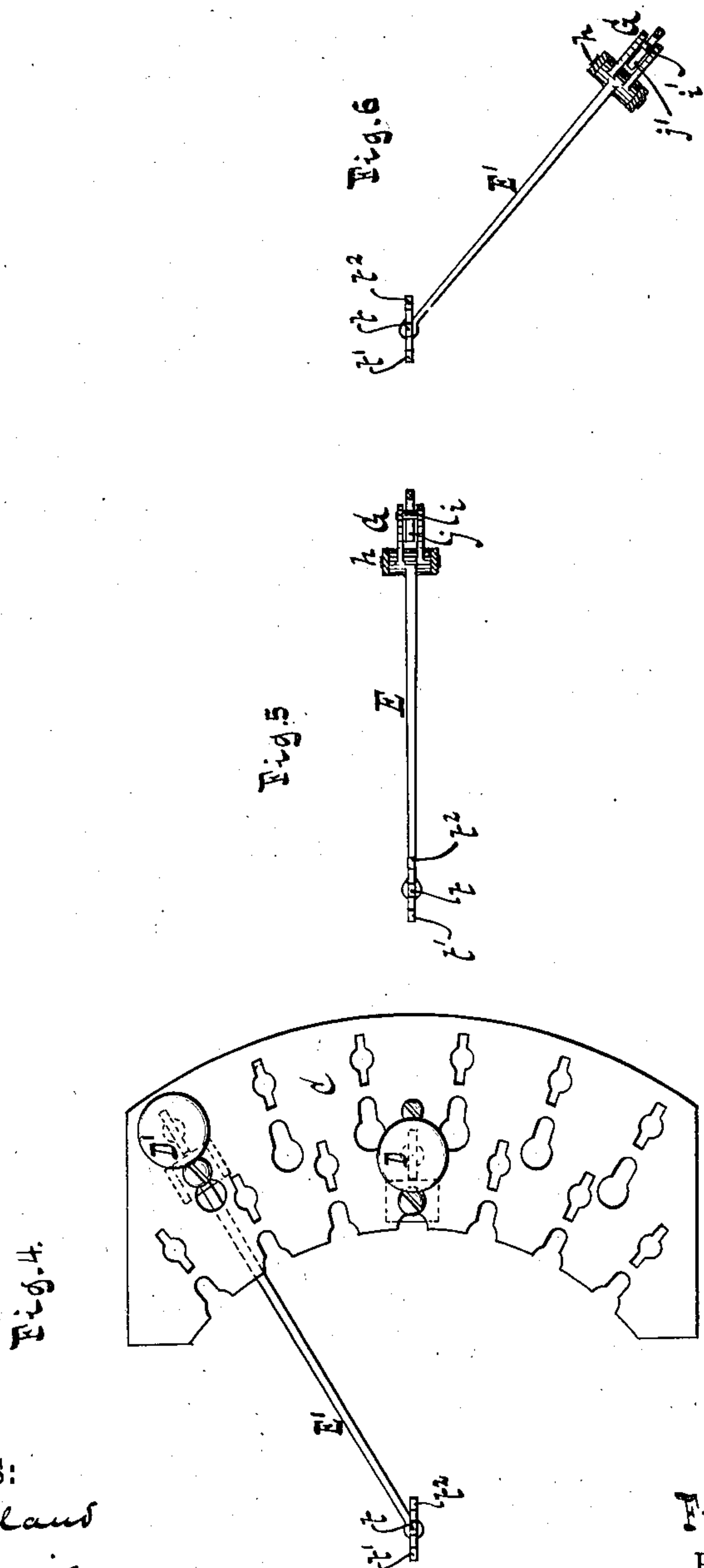
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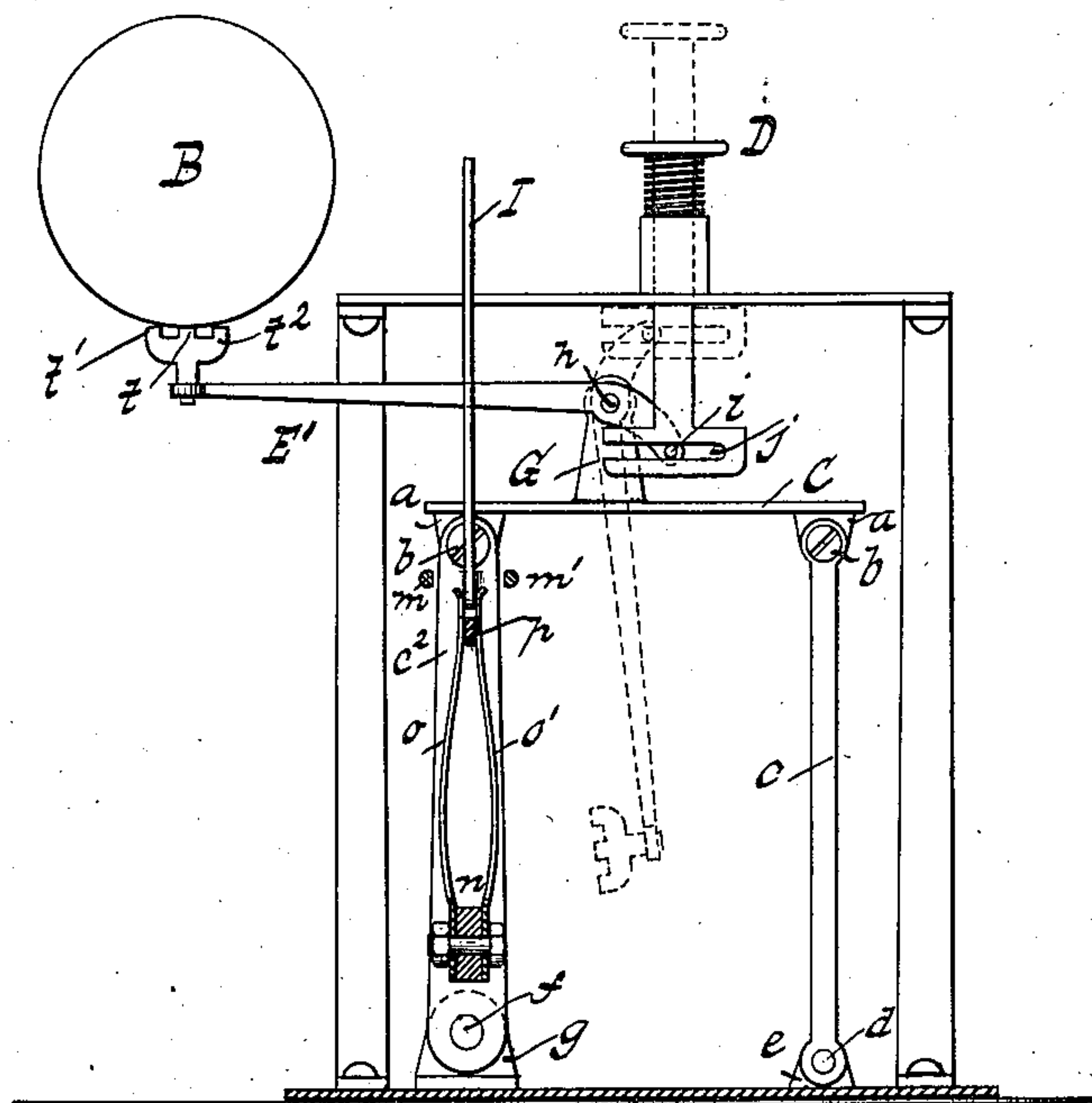
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Fig. 7.



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UNITED STATES PATENT OFFICE.

FRANZ X. WAGNER, OF NEW YORK, N. Y., ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO STEPHEN T. SMITH AND HENRY H. UNZ, BOTH OF SAME PLACE.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 326,178, dated September 15, 1885.

Application filed April 9, 1885. (No model.)

To all whom it may concern:

Be it known that I, FRANZ X. WAGNER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Type-Writers, of which the following is a specification.

This invention consists in the combination of type-bars, each having two or more letters or characters, and each being actuated by a suitable key, with a vibratory frame which carries the type-bars, and which can be adjusted instantly to bring either of the types on the type-bar in the proper position to make an impression. The vibratory frame is subjected to the action of two springs, which have a tendency to retain the same in its normal position. The keys for actuating the type-bar may be mounted in the vibratory frame, or they may be mounted in a stationary key-board which does not partake of the movement of the vibratory frame.

In the accompanying drawings, Figure 1 represents a transverse vertical section in the plane *yy*, Fig. 2. Fig. 2 is a vertical section in the plane *xx*, Fig. 1, showing the parts in position when the middle key is depressed and the vibratory frame in its normal position. Fig. 3 is a similar view showing the vibratory frame in its extreme positions. Fig. 4 is a plan or top view when one of the extreme keys is depressed. Fig. 5 is a detached plan of the middle type-bar. Fig. 6 is a similar view of one of the extreme type-bars. Fig. 7 illustrates a modification hereinafter referred to.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates the base or bed plate which supports the working parts of my type-writer.

B is the cylindrical platen, which is mounted in suitable bearings supported upon the bed-plate A in the manner usually practiced in type-writing machines.

C is the key-board, and D D' are the keys which serve to actuate the type-bars E E'. In the example shown in the drawings the key-board C is provided with lugs *a a*, which project from its lower surface, and which are con-

nected to the vibratory frame F by pivots *b b*. This frame consists of three links, *c c' c''*, the link *c* being supported by a pivot, *d*, which has its bearings in a lug, *e*, secured to the bed-plate A, while the links *c' c''* are mounted upon a rock-shaft, *f*, which has its bearings in lugs *g g*, secured to the bed-plate A. The object of connecting the vibratory frame F to the key-board by means of pivots *b b* is to permit the key-board to retain a horizontal position when the frame is moved to and fro.

To the lower surface of the key-board is firmly secured a series of hangers, G, which form the bearings for the fulcrum-pins *h h'* of the type-bars E E'. Each of these type-bars carries two or more types, *t t' t''*, representing letters or characters, and in the example shown in the drawings the number of types carried by each type-bar is three, such number being the most convenient for my purpose. It must be remarked, however, that I do not want to limit myself to the exact number of three types on each type-bar, since this number may be changed without departing from the spirit of my invention.

In the outer ends of the type-bars are secured pins *i i'*, which engage with slots *j j* in the keys D D', so that by depressing one of the keys the corresponding type-bar is swung up, so as to bring one of the types on its inner end in contact with the platen.

To the key-board is firmly secured by hangers *k* a plate, H, in which are guided the shanks of the keys, and springs *l* serve to raise the keys to their normal position. The construction of the keys and the key-board, however, forms no part of my present invention, and may be changed without departing from the spirit of my invention.

The plate C, which has been described as the key-board, may also be made independent of the key-board, as shown in Fig. 7, so that said plate moves with the vibratory frame F while the key-board remains stationary.

On the link *c'* of the vibratory frame F is firmly secured a handle, I, and outside of this handle (see Fig. 1) is a standard, J, which rises from the bed-plate A, or which may form

part of the main frame of the type-writer. In this standard are firmly secured two pins, *m* *m'*, which form stops for the handle *I*, and serve to limit the vibratory motion of the frame *F*.
 5 From the standard *J* projects a lug, *n*, on which are firmly secured two springs, *o* *o'*, which have a tendency to close up against the stop *p* and retain the handle *I* and the vibratory frame *F* in their normal position, as shown in
 10 Fig. 2. If one of the keys is depressed while the vibratory frame is in its normal position, the type-bar corresponding to said key is raised and the middle type, *t*, carried by said type-bar, produces the required impression.
 15 (See Fig. 2.) If the vibratory frame is swung into the position shown in full lines in Fig. 3 and one of the keys is depressed, the type *t'* of the corresponding type-bar produces the required impression, and if the vibratory frame
 20 is brought into the position shown in dotted lines in Fig. 3 the type *t'* produces the required impression.

I am aware that the type-bars for type-writers, each having two or more letters or characters, are not new, and I do not claim such
 25 as my invention.

It must be remarked that instead of moving the vibratory frame by means of the handle *I* a finger-key may be employed for the purpose.
 30 What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a type-bar carrying two or more types and a key for actuating it, of a vibratory frame which carries the type-bar, and which can be instantly adjusted to bring either of the types on the type-bar in the line of printing, substantially as shown and described.

2. The combination, with the vibratory frame *F*, of a series of type-bars, *E* *E'*, and a series of keys, *D* *D'*; substantially as shown and described.

3. The combination, with the vibratory frame *F*, of the key-board *O*, the keys *D* *D'*, mounted in the key-board, the hangers *G*, secured to the key-board, and the type-bars *E* *E'*, mounted in said hangers, substantially as shown and described.

4. The combination, with the vibratory frame *F*, the keys *D* *D'*, and the type-bars *E* *E'*, of the handle *I*, the springs *o* *o'*, the stop *p*, and the stops *m* *m'*, substantially as shown and described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

FRANZ X. WAGNER. [L. S.]

Witnesses:

W. HAUEF,
 E. F. KASTENHUBER.