

(No Model.)

C. ELLIOTT.

KEY ACTION FOR TYPE WRITING MACHINES.

No. 583,675.

Patented June 1, 1897.

Fig. 1.

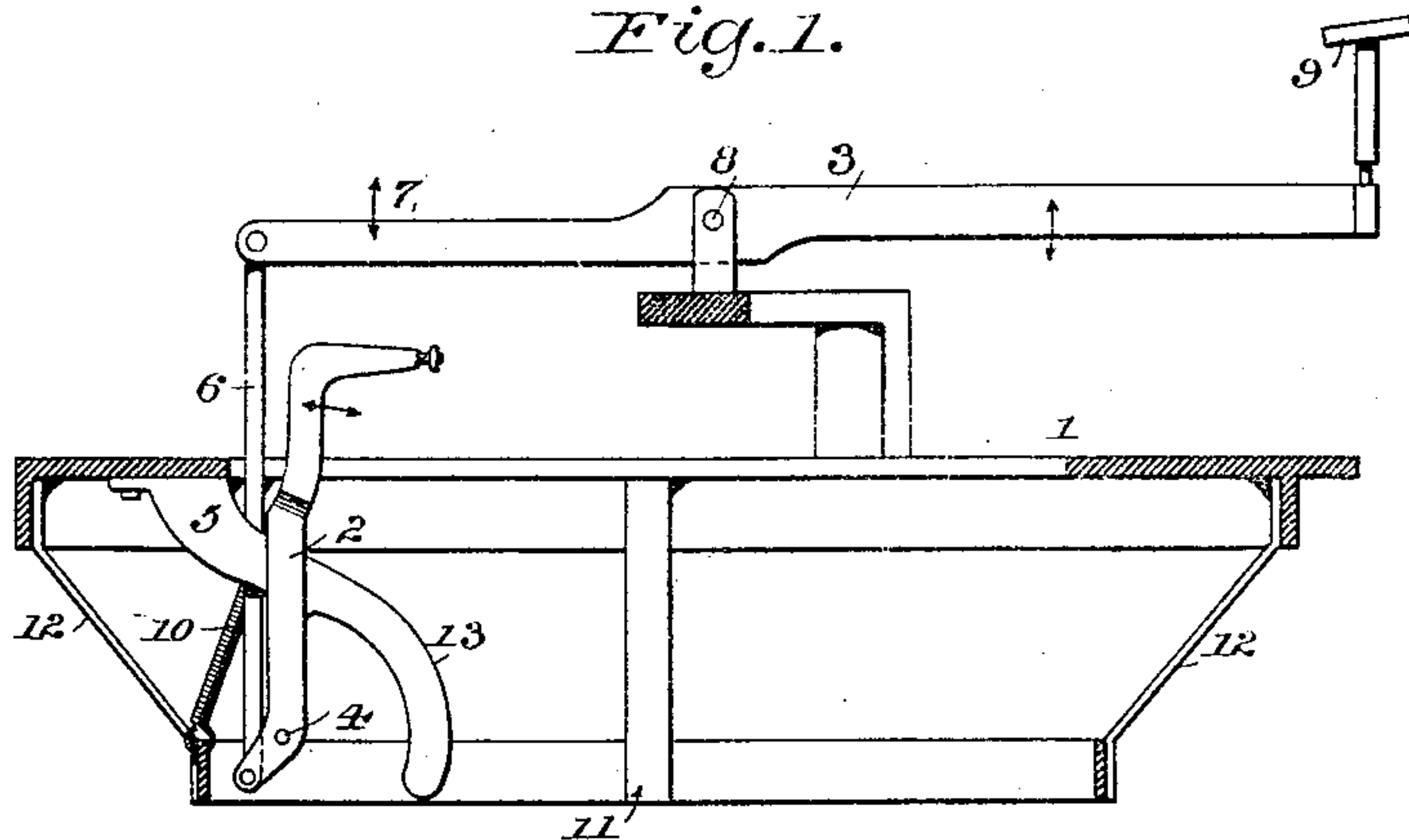


Fig. 2.

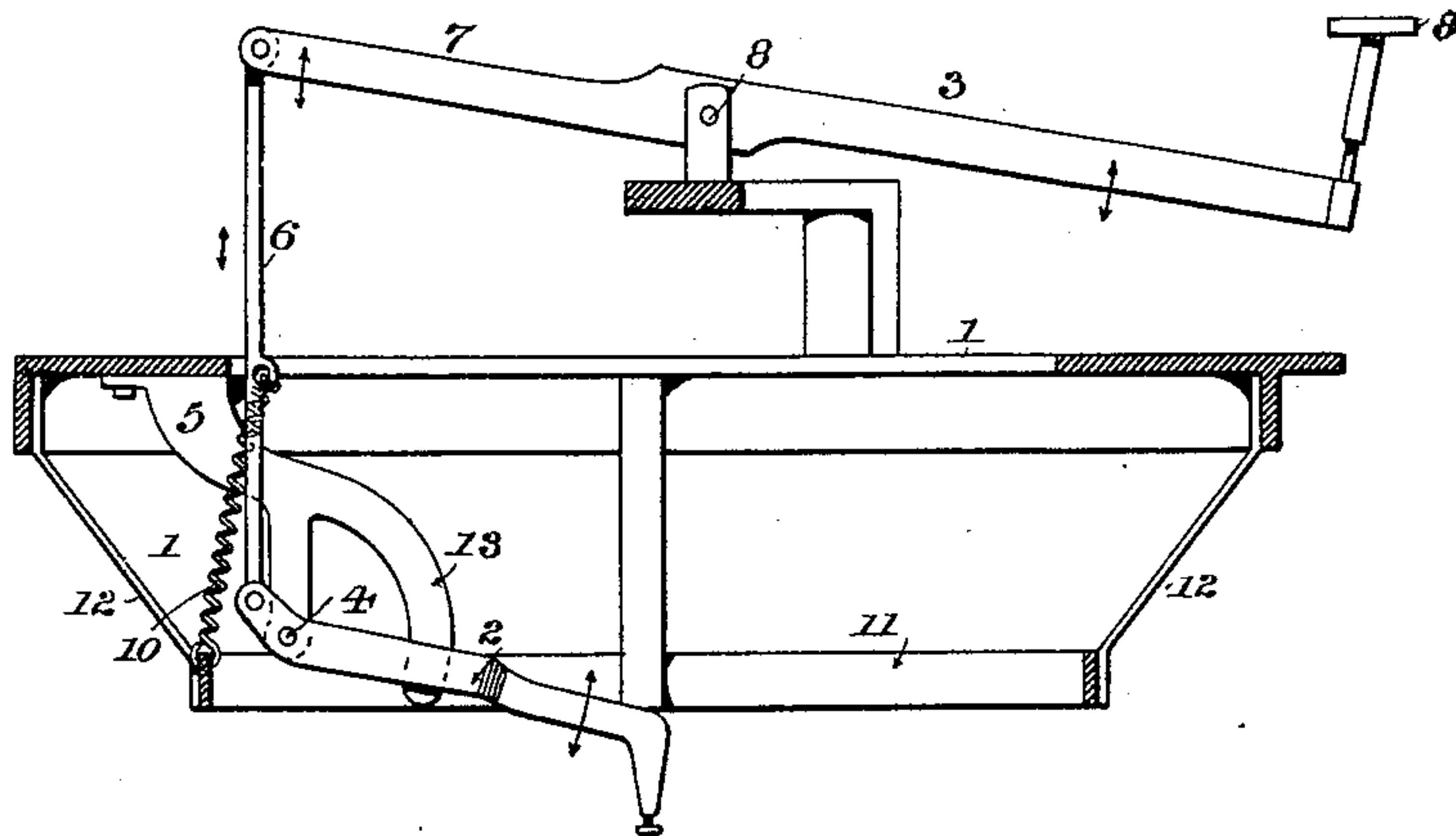
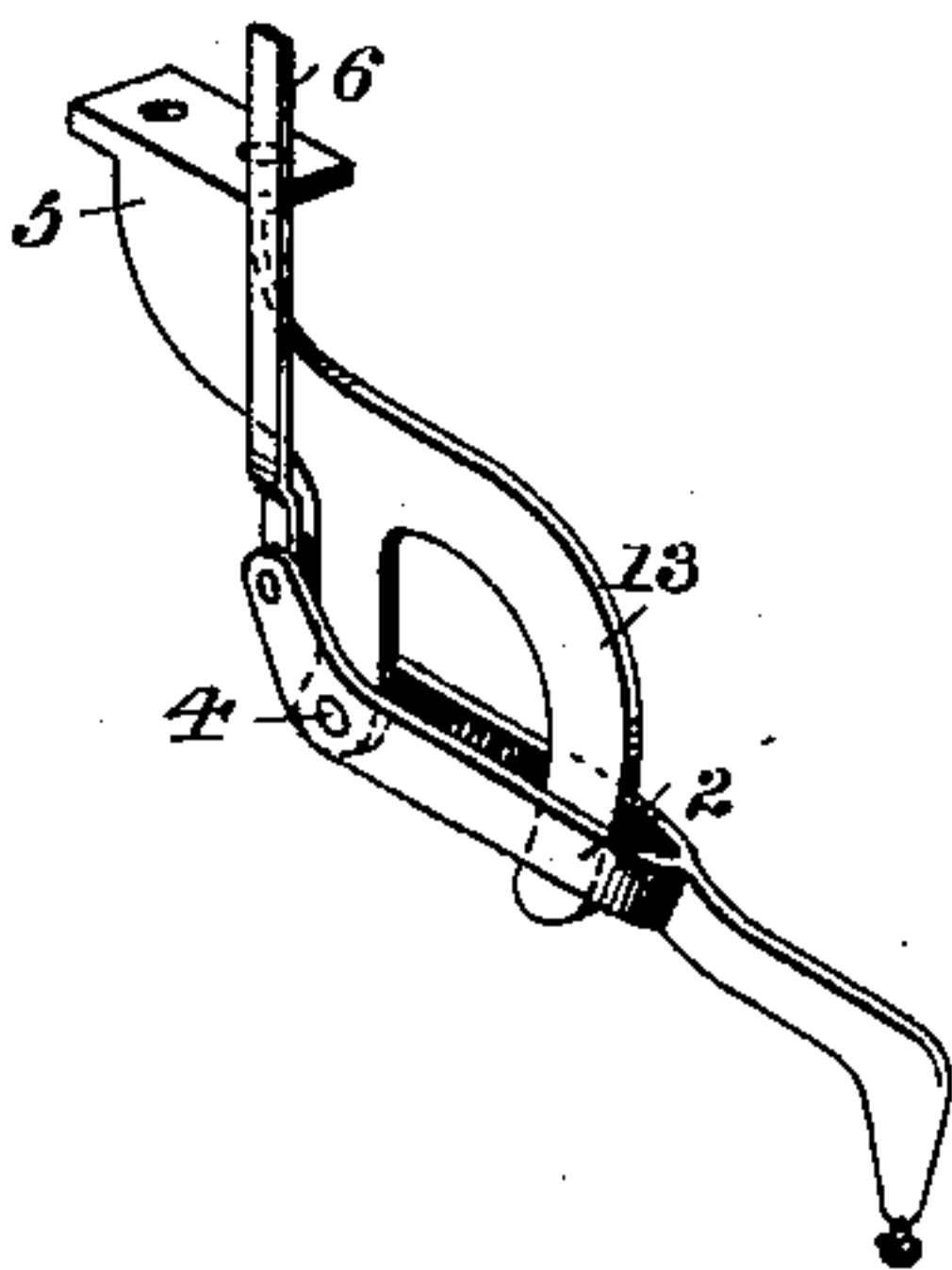


Fig. 3.



WITNESSES:

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KEY-ACTION FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 583,675, dated June 1, 1897.

Application filed March 24, 1896. Serial No. 584,662. (No model.)

To all whom it may concern:

Be it known that I, CRAWFORD ELLIOTT, of New York, county of New York, and State of New York, have invented a new and useful Improvement in Key-Actions for Type-Writing Machines, of which the following is a specification.

This invention relates to a key-action for type-writing machines, and has reference more particularly to a guiding device for the type-bar, the object being to maintain the alignment of the type-bars and to insure their striking at the same relative point as regards the frame by which they are carried.

With these ends in view my invention consists in combining with the type-bar a guide of peculiar construction relatively fixed adjacent to the bar in position to be engaged by the latter as it is moved to strike the printing-surface.

The invention consists also in the details of construction and combination of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a sectional elevation of such parts of a type-writing machine as are necessary to illustrate my invention. Fig. 2 is a similar view with the type-bar in active position. Fig. 3 is a perspective view of the type-bar and its guiding device.

In the accompanying drawings I have represented my invention as being embodied in a type-writing machine in which the type-bars are arranged to strike downward at a common point through an open-base frame, as in the well-known book type-writing machines, but it will be understood that my invention is not to be confined to machines of this character, and that it is applicable as well to other machines—in fact, to any machine equipped with movable type-bars.

Referring to the drawings, 1 represents a ring-frame in which is mounted a series of type-bars 2, (but one being shown,) actuated by a series of levers 3 (but one being shown) and arranged to strike downward at a common point onto the underlying paper or book, as the case may be. Each of the type-bars in the present instance is composed of two

sheet-metal plates, which extend side by side parallel to each other a slight distance apart, whereby there is left between the plates an opening. These bars are each pivoted near the lower end on a horizontal axis, as at 4, to the lower end of a depending bracket 5, the upper end of which is fixed firmly to the under side of the ring-frame. The extreme lower end of the type-bar is pivoted to a vertical link 6, which has its upper end pivoted in turn to the rear end of a horizontal key-lever 7, which is pivoted between its ends on a horizontal axis, as at 8, to the ring-frame, and which is provided at its front end with a finger-key 9. The type-bars are held yieldingly in vertical position, as shown in Fig. 1, by spiral springs 10, connected to the link about midway of its length and to an annular frame 11, which surrounds the lower ends of the type-bars, and which is fixed to the lower ends of hangers 12, depending from the under side of the ring-frame.

From this description it will be seen that when the key-lever is depressed the type-bar will be moved on its axis from a vertical position to a horizontal active position, as indicated in Fig. 2, the type-bar traveling in a vertical plane.

In applying my invention to type-bars of this construction and arrangement I apply to each standard 5, to which the bar is pivoted, a guiding-arm 13, which, starting from the standard about midway of its length, extends in an arc of a circle described from the pivotal point of the type-bar, the arm terminating in a line level, or substantially so, with the lower end of the standard, or the pivotal point of the type-bar. The arm extends between the two sheet-metal plates of which the type-bar is composed and acts as a guide for the same, compelling the type-bar to move in a truly vertical plane, effectually preventing any relative side movement of the bar and causing it to strike at the same relative point as regards the frame by which it is carried.

Having thus described my invention, what I claim is—

In a type-writing machine the combination with the frame, of the bracket depending

therefrom, the type-bar pivoted near its lower
end to the lower end of the bracket, a guiding-
arm extending from the bracket above the
pivot in an arc of a circle struck from the
5 pivotal point of the type-bar and terminating
on a level or substantially so with the pivot
of the bar.

In testimony whereof I hereunto set my
hand, this 11th day of March, 1896, in the
presence of two attesting witnesses.

CRAWFORD ELLIOTT.

Witnesses:

CHARLES E. RIORDON,
F. S. ELMORE.