

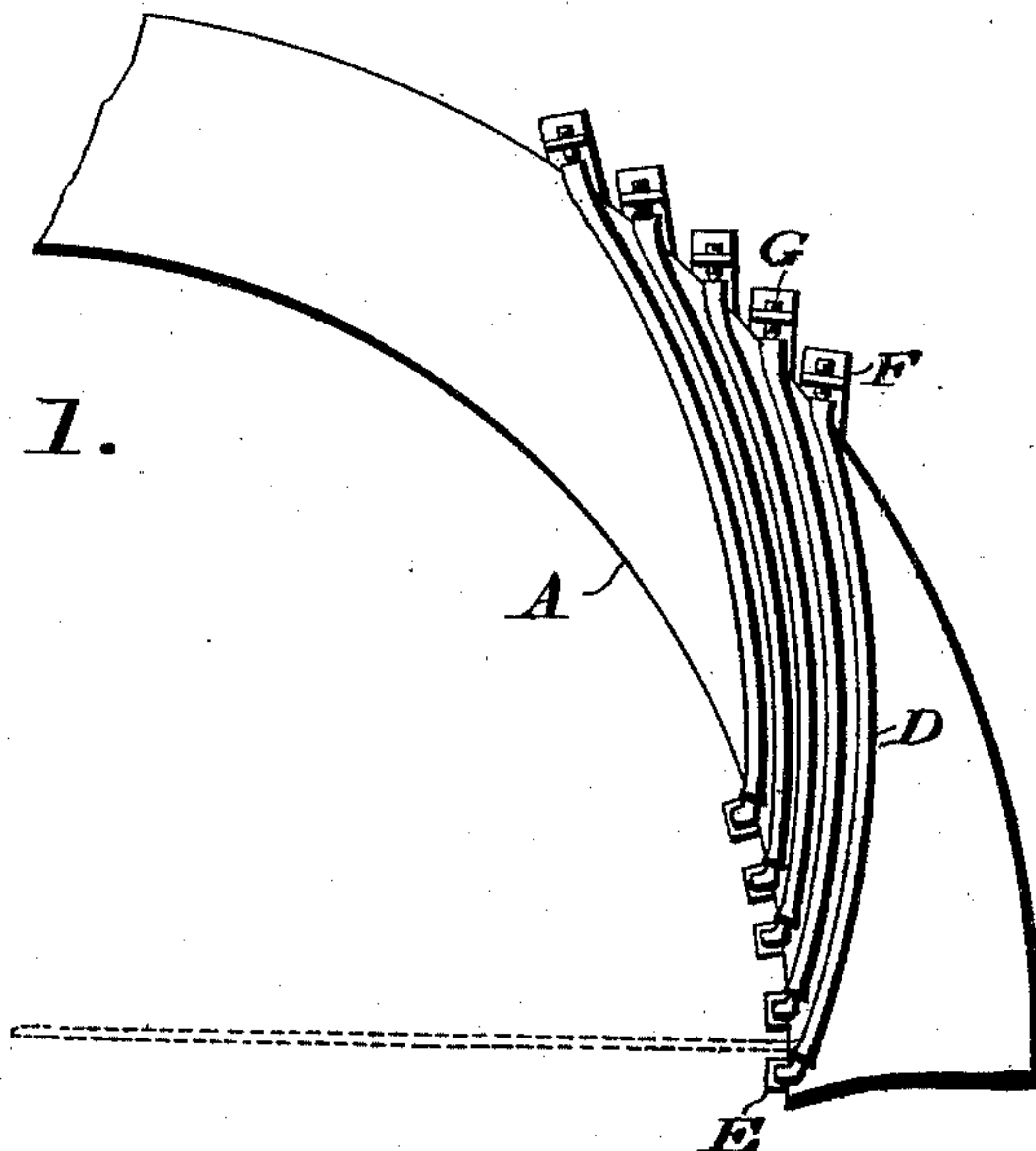
(No Model.)

C. O. MALTBY.  
TYPE WRITING MACHINE.

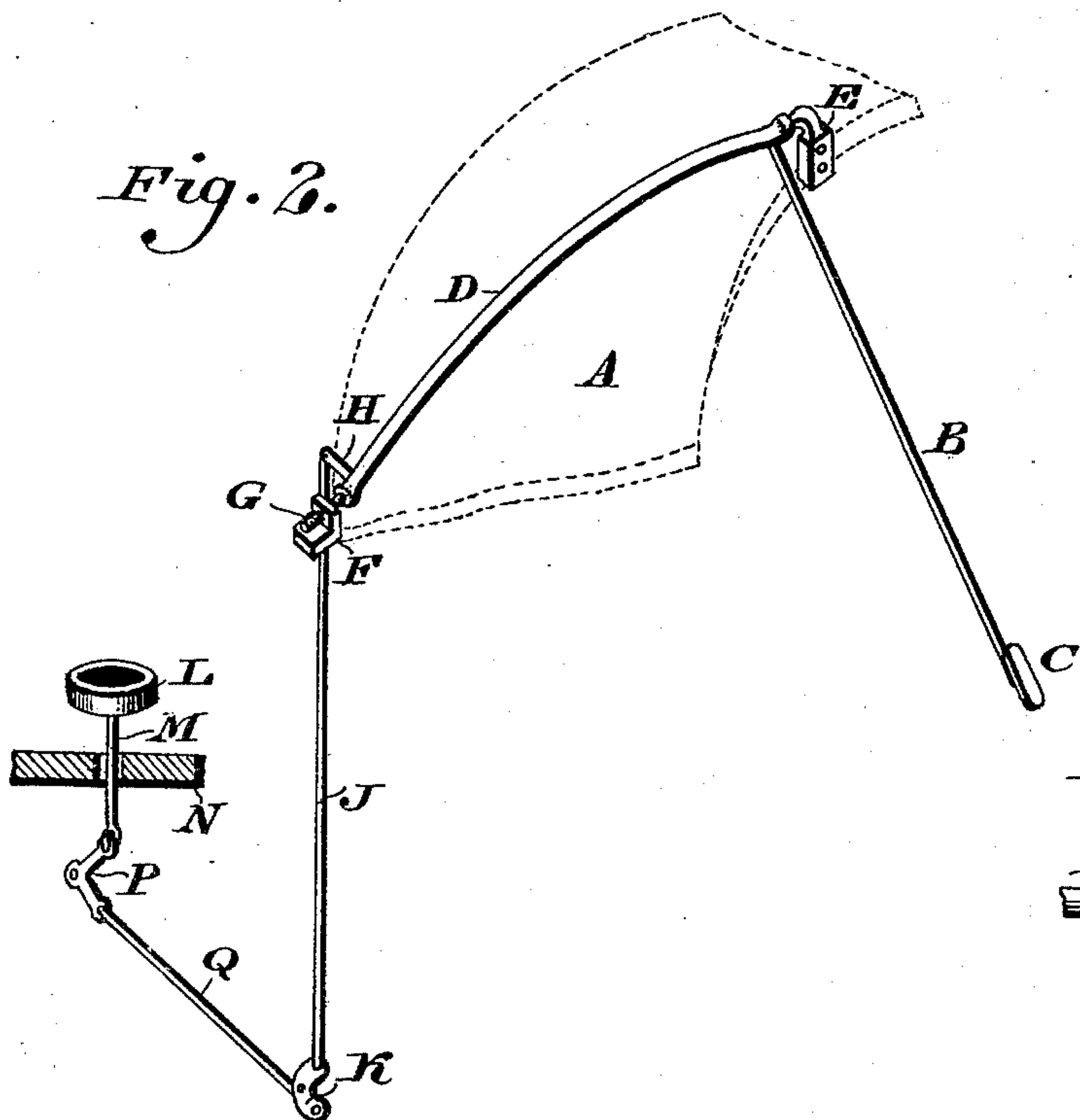
No. 474,395.

Patented May 10, 1892.

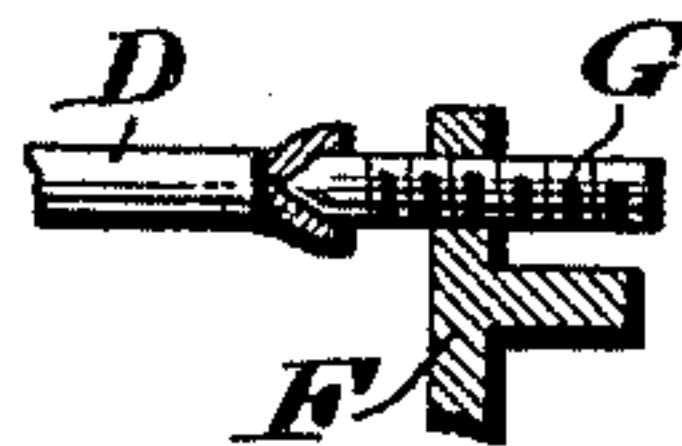
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

CLARK O. MALTBY, OF PHILADELPHIA, PENNSYLVANIA.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 474,395, dated May 10, 1892.

Application filed May 2, 1891. Serial No. 391,345. (No model.)

*To all whom it may concern:*

Be it known that I, CLARK O. MALTBY, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Type-Writing Machines, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in type-writing machines; and it consists of mechanism, substantially as described, for operating the type-bars of a type-writing machine.

Figure 1 represents a top or plan view of a portion of the frame of a type-writing machine embodying my invention. Fig. 2 represents a perspective view of the mechanism for operating the type-bar, with a sectional view of a portion of the keyboard of the machine. Fig. 3 represents a sectional view in elevation of a detail portion of the device.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a portion of the frame of a type-writing machine, and B a bar carrying on or near one end a type C. The bar B is connected at one of its ends with an oscillating curved shaft D, which extends diagonally or obliquely across the top of the frame A, so that said bar B extends therefrom on the inner side of the frame and at a right angle thereto. The shaft D is journaled in bearings E and F, secured, respectively, at the inner and outer edges of the frame, both ends of the shaft being recessed to receive the bearings, one of which consists of a conically-pointed screw G, adapted to work in the bearing or lug F. Projecting radially from the shaft D is a short arm H, to the outer end of which is pivoted the downwardly-extending rod J, connected at its lower end to the elbow-lever K.

A key L of the machine has a stem or downwardly-projecting rod M, which works in a slot in the keyboard N of the machine, pivotally connected to one limb of the elbow-lever P, the other limb of which is connected

by a horizontal rod Q with the elbow-lever K. It will be seen that the downward movement of the key L, with its stem M, will oscillate the lever P, lowering the limbs thereof, thereby moving the rod Q and lever K, so as to depress or lower the rod J and the arm H, thus oscillating the shaft D, whereby the bar B, with the type C, is raised, the latter being brought in contact with the inking-ribbon of the machine for making an impression on the paper. The conical screw-bearing G permits the adjustment of the same when required in case of the wearing of the walls of the socket ends of the shaft D.

By having the shafts D curved a greater number of type-bars can be employed at right angles to said shafts, and the limit of movement of oscillation of each of the said shafts is also determined by the contact of the arch of the curve with the frame.

The construction herein described permits a uniform leverage and a similar movement to each key of the machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A frame, a curved shaft having bearings on lugs at or near the inner and outer edges of said frame, a type-bar connected with the inner end of said shaft at a right angle thereto, a key, and mechanism connected with said key and to said shaft for oscillating the latter, said parts being combined substantially as described.

2. In a type-writing machine, a frame, lugs on the inner and outer upper edges of said frame, a curved shaft extending above and diagonally across said frame and having bearings in said lugs, a depending type-bar connected with the inner end of said shaft, and a rod extending from said shaft and connected with operating mechanism for oscillating said shaft, said parts being combined substantially as described.

CLARK O. MALTBY.

Witnesses:

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