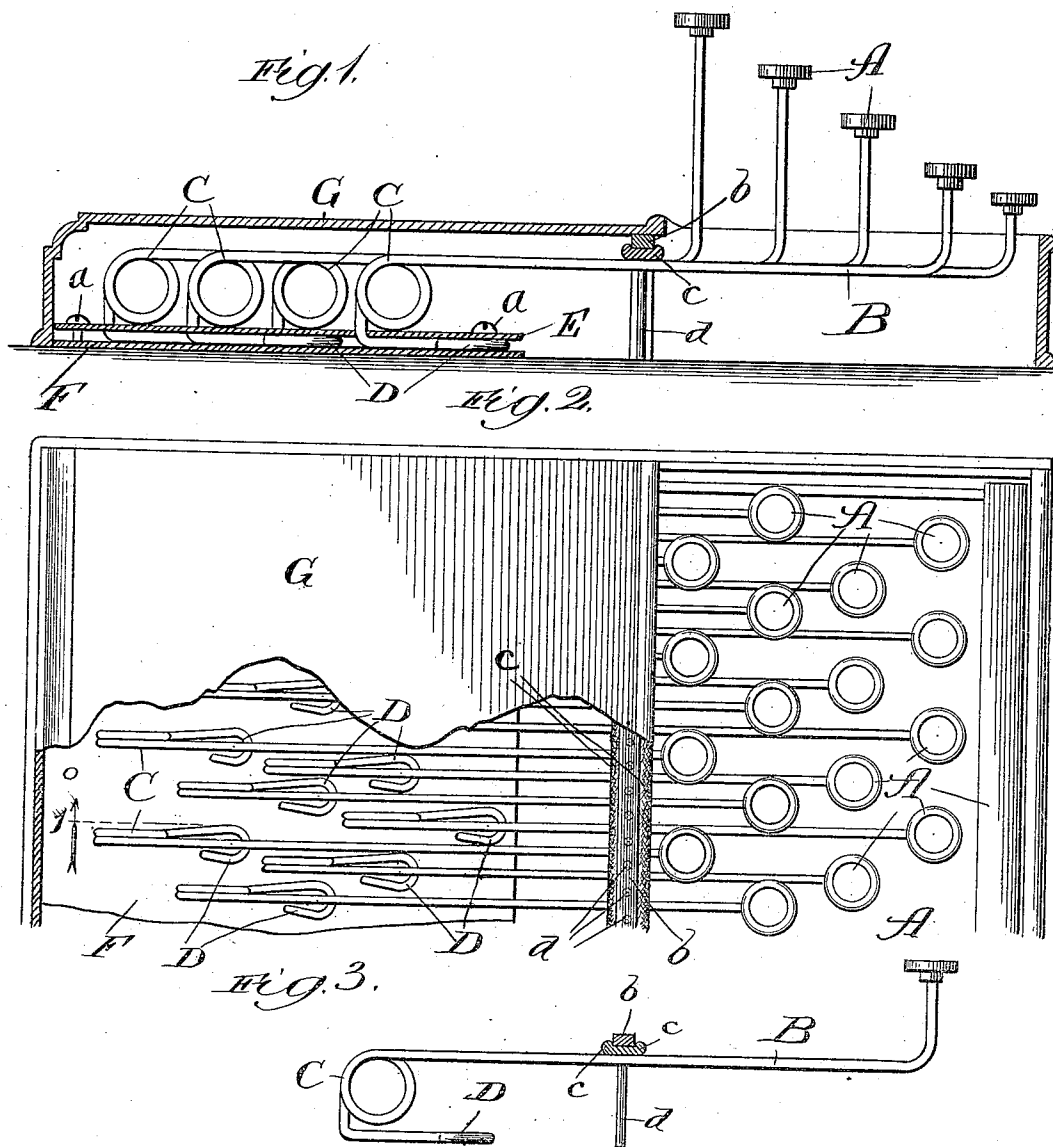


(No Model.)

W. P. COSPER.
DUMMY TYPE WRITING MACHINE.

No. 511,754.

Patented Jan. 2, 1894.



Witnesses:
E. C. Gaylord,
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Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM P. COSPER, OF CHICAGO, ILLINOIS.

DUMMY TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 511,754, dated January 2, 1894.

Application filed May 1, 1893. Serial No. 472,575. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. COSPER, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Dummy Type-Writing Machines, of which the following is a specification.

The object of my invention is to make a dummy typewriter that will have the arrangement of the keys similar to those now in use, so that students in practicing will acquire the same skill and facility of operation as they would when using a standard typewriter, but with less expense; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a vertical section taken on the line 1 of Fig. 2, but with the upper holding or clamping plate in place; Fig. 2 a broken plan view of a portion of my dummy typewriter, but with the upper holding or clamping plate removed; and Fig. 3 a side elevation of one of the keys, detached.

In making my improved dummy typewriter, I make keys, A, intended to represent and correspond in number and position to the keys in the key board of a standard typewriter. These keys are each mounted on the end of a spring wire, B, which is intended to be of sufficient size and resiliency as to impart to the keys the proper resistance when struck by the finger, to make their action similar to that of the keys in standard typewriters, as well as to restore the keys again to their normal and proper position. The inner ends of the spring arms supporting the keys are given a coil or bend C, to increase the resiliency or springiness of the wire. Extending from the coil, I bend a hook or loop D, partly shown in Fig. 2, with the members of the hook or loop in the same horizontal plane, to facilitate their secure attachment in place. I make two holding or clamping plates, E and F, adapted to clamp the hooks or loops on the ends of the spring arms between them, so as to clamp them securely in position and prevent the wire from turning or the keys from getting out of their proper position. The upper holding plate is provided with a number of holes, cor-

responding to the number of keys, through which the spring wires extend to bring their hooks or loops below the plate, in position to be clamped and held by the lower plate. The holes in the upper holding plate are intended to be in such position as that, when the spring wires are inserted through them, the keys will be brought to their proper position by arranging the holes in rows, with each row the proper distance in front of the preceding one. The key arms may all be made with their shanks the same length, as when in position they will bring the keys into the proper rows in the key board. The clamping or holding plates may be securely fastened together by screws or bolts and nuts *a*, as shown in Fig. 1.

Where desired, the frame may extend over the inclosing shanks of the key arms, as represented in Figs. 1 and 2, and form a cover G, although this may be dispensed with if desired.

To limit the upward movement of the keys, I arrange a cross bar *b*, extending from side to side of the machine, and preferably line it with a cushion *c*, so as to prevent the spring arms from striking the stop with a noise. The cross bar is also provided with downwardly extending fingers *d*, to furnish guides for the spring arms of the keys.

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

1. In dummy typewriters, the combination of keys mounted on spring arms provided with loops at their inner ends, and clamping or holding plates between which the loops are arranged, substantially as described.

2. In dummy typewriters, the combination of keys mounted on spring arms and provided with coils near their inner ends and with loops, and holding or clamping plates, the upper one being provided with holes through which the spring arms pass and the two clamping or holding the loops of the spring arms between them, substantially as described.

WILLIAM P. COSPER.

Witnesses:

THOMAS A. BANNING,
SAMUEL E. HIBBEN.