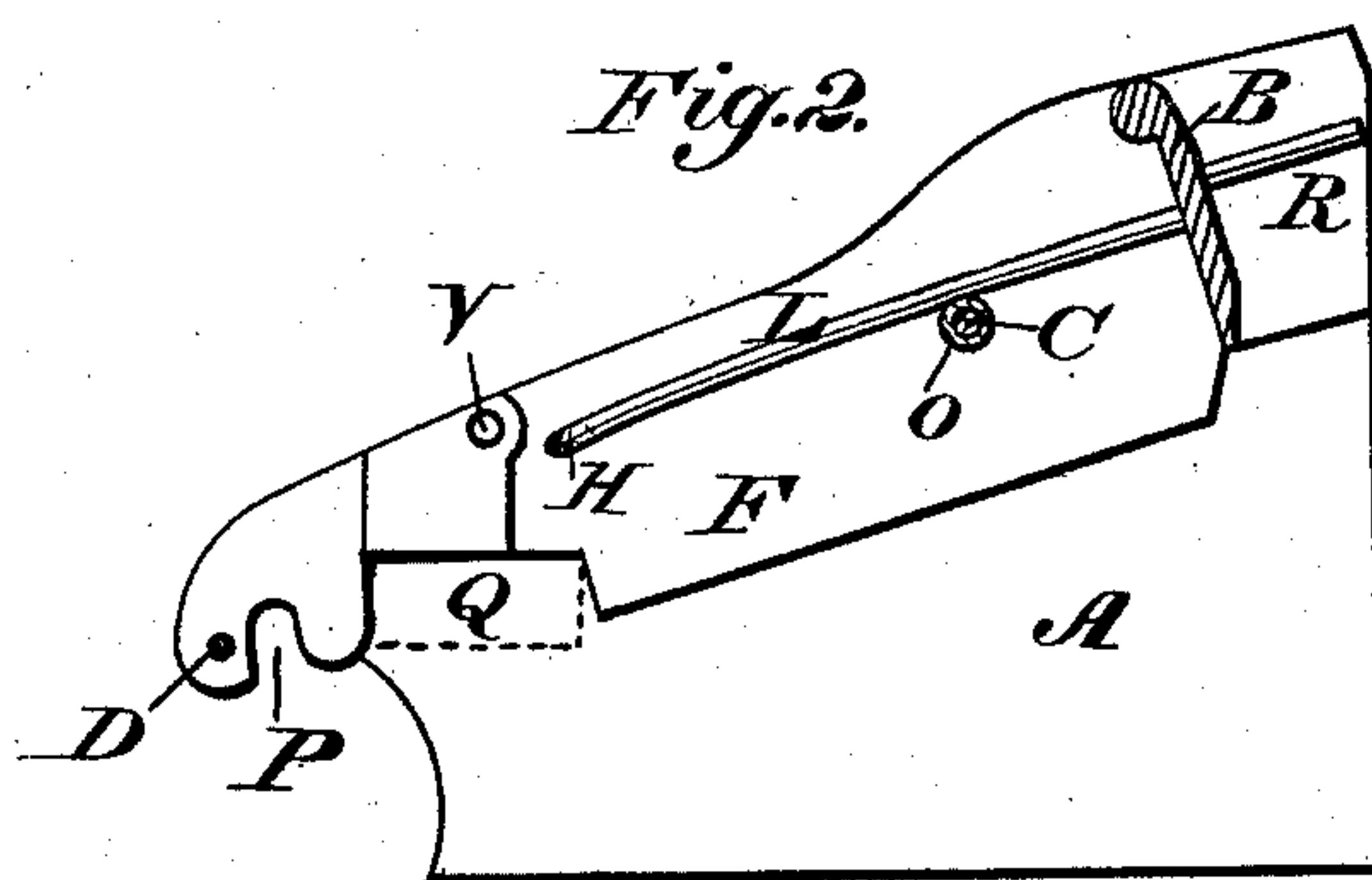
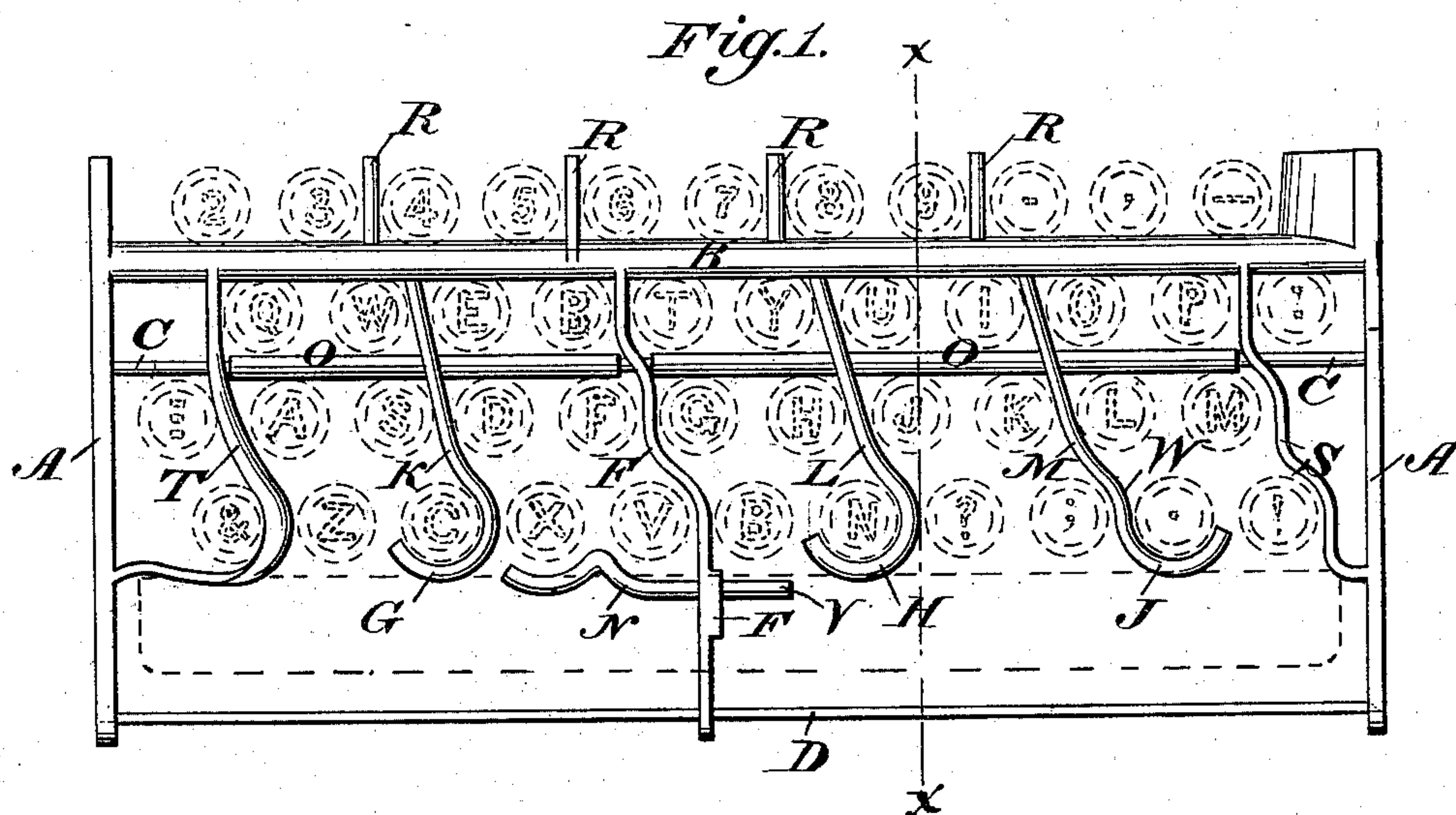


A. M. Da COSTA.
Finger Guide for Type Writers.

No. 229,386.

Patented June 29, 1880.



WITNESSES:

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ALBERT M. DA COSTA, OF BROOKLYN, NEW YORK.

FINGER-GUIDE FOR TYPE-WRITERS.

SPECIFICATION forming part of Letters Patent No. 229,386, dated June 29, 1880.

Application filed February 28, 1880.

To all whom it may concern:

Be it known that I, ALBERT M. DA COSTA, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Finger-Guide for Type-Writers, of which the following is a specification.

The object of my invention is to provide the key-board of a type-writer with guides for the fingers, so that keys may be quickly located without the aid of sight.

To this end I employ one or more longitudinal bars and one or more transverse bars, which are arranged between corresponding rows of keys, and thus separate them into easily-distinguishable sets or ranks, and also serve as guides along which the fingers are passed to locate and reach different keys.

The invention also includes certain accessory devices or features, as hereinafter described.

In accompanying drawings, Figure 1 is a plan view of bars or finger-guides arranged between longitudinal and transverse rows of type-writer keys, some of the bars being in this instance rigidly connected with end pieces, so as to constitute parts of a rigid frame. Fig. 2 is a cross-section on line *x x*, Fig. 1.

The parallel plates *A A* and connecting-bar *D* constitute parts of a frame to which the longitudinal bars or rods *B* and *C* are shown attached. The latter are parallel and divide or separate longitudinal rows of keys. The bar *B* is arranged near the back portion of the key-board. The bar or rod *C* is covered with silk, velvet, rubber, or some other similar material that will enable it to be readily distinguished from the bar *B* by the sense of touch, and arranged in front of the wider bar *B*, which is inclined to a vertical plane, as shown.

The end pieces, *A A*, are horizontal at the bottom, and their upper edge is preferably inclined from the rear toward the front on a gently-curved line. These two end pieces are connected with each other by the inclined longitudinal bar *B*, set back a short distance from the rear end of the end pieces, by the longitudinal rod *C*, covered with silk, velvet, rubber, or some other similar material, and arranged to the front of the bar *B* about the thickness of a finger, and finally by the front longitudinal rod, *D*, connecting the front ends of the side pieces and the intermediate transverse piece, *F*. The longitudinal bar *B* is in-

clined toward the lower rear end of the end pieces, *A A*, so that the fingers are guided down onto the uppermost or fourth row of keys containing the numerals. The longitudinal rod *C* is so arranged that if the inner sides of the fingers rest on the rear side of the same the third row of keys will be touched, and if the outer sides of the fingers touch the front side of the rod *C* the second row of keys will be touched.

A number of loops, *G*, *H*, and *J*, at the ends of the transverse rods *K*, *L*, and *M*, and the curved rod *N*, attached to the intermediate transverse piece *F*, are so arranged that if the inner sides of the fingers rest against the rear sides of these loops the lowest or first row of keys is touched. So as to be able to distinguish immediately whether the fingers rest against the bar *B* or against the rod *C*, the latter is covered with velvet, rubber, silk, or some such material, *O*, which produces a different sensation when touched from that of metal.

The end pieces are provided with a recess, *P*, at the forward end, into which recess the edge of the front wall of the key-board passes. The intermediate transverse piece, *F*, is provided with a larger recess, *Q*, into which the space-bar fits.

By means of the above arrangement the several rows of keys can easily be found; but that is not sufficient. The several keys must be found just as conveniently. For this purpose the transverse bars and rods are so arranged as to form compartments containing two letters or keys. The numerals are subdivided into divisions of two by the projections *R R*, and the other three rows are subdivided into divisions of two on each row by the transverse bars *K*, *L*, and *M* and the transverse plates *S* and *T* and *F*, all of which are arranged so as to follow the spaces between the keys. A few characters, which are, however, used but very seldom, are contained in the subdivisions formed by the transverse bars *S* and *T* and the end pieces, *A*.

An arm, *V*, projects laterally from the lower end of transverse bar *F*, and serves as a rest for the thumb of the (right) hand. This device is important as a means of support for the hand, and the consequent relief of certain muscles of the (right) arm, which, (particu-

larly in the case of beginners,) become excessively wearied by continuously operating the keys while the arm is held and moved in a constrained position. The said thumb-rest sub-
 5 serves its function chiefly when the right hand is not required to be operating on the keys, but it may be used at the same time that the adjacent keys are being operated. It may be made adjustable in various positions.

10 This apparatus is placed over the key-board of the type-writer in such a manner that the end pieces, A, rest against the ends and on the bottom of the key-board frame and can be easily removed.

15 If desired, one or all the transverse bars may be arranged with a shoulder to facilitate in finding the lower two rows of keys, as represented at W on the transverse rod M.

The operation is as follows: The left hand
 20 operates the keys to the left of the intermediate transverse piece, F, whereas the right hand operates the keys to the right of it. For example, to write the word "Washington," the operator would place the inner sides of his fin-
 25 gers of his left hand against the rear side of the rod C, with the third and fourth fingers in the space formed by the bar B and rod C and the transverse bar T and rod K, and would then depress the third finger. Then he would
 30 place the outer sides of his fingers against the front side of the bar C, with the third and fourth fingers in the corresponding subdivision, and depress the fourth finger and then the third. He then places his right hand so
 35 that the outer sides of the fingers rest against the front of the rod C, and the first and second fingers are in the first compartment to the right of the bar F of the second row of keys. He then depresses the second finger
 40 and proceeds in this manner. There are five transverse rows of compartments containing two keys for each longitudinal row of keys. Beginning at the left, the third and fourth fingers of the left hand are always placed in

the first row of transverse compartments, the 45 first and second fingers in the second row. The first and second fingers of the right hand are always placed in the compartments of the third transverse row, the third and fourth or the first and second in the fourth row, and the 50 third and fourth in the fifth row.

The apparatus is represented and described as being used in combination with the Sholes & Glidden type-writer, but can be modified so as to be used with any kind of type-writer. 55

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

1. In a type-writer, the combination, with the keys, of a bar or bars adapted for dividing or 60 separating longitudinal rows of keys, and another bar or series of bars, which are arranged at an angle to the former, for dividing transverse rows of keys, all of said bars being attached to rigid supports, substantially as 65 shown and described.

2. As a new article of manufacture, the finger guide for the key-board of a type-writer, consisting of the longitudinal bars B C and the series of transverse bars, arranged as 70 shown, and suitably curved or shaped to indicate the location of certain keys.

3. In a type-writer, the combination, with the keys and a bar or rod arranged between longitudinal rows thereof, of the transverse 75 rods, which are curved or hooked at the lower end, contiguous to the lower keys, as shown and described.

4. The combination, with the keys of a type-writer and a bar or rod which separates rows 80 of said keys, of another contiguous bar or rod having a different surface, which renders it readily distinguishable from the other by the sense of touch, substantially as set forth.

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Witnesses:

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