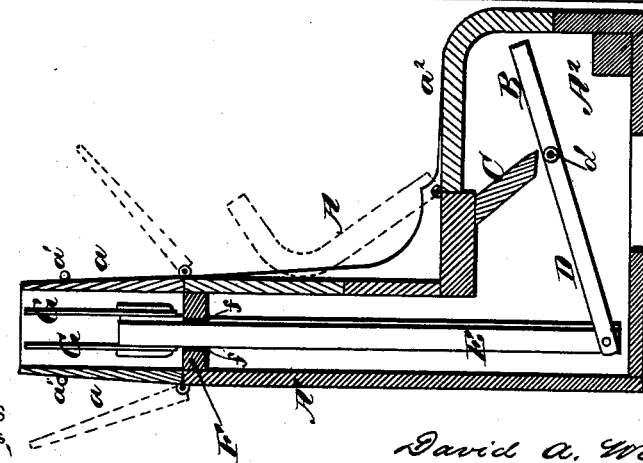
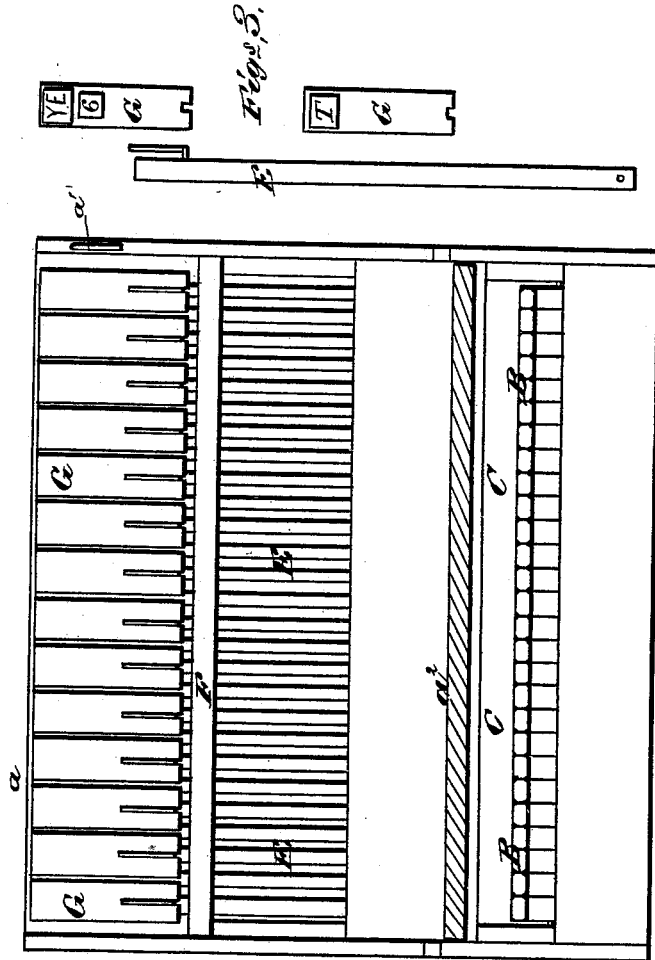


D. A. WILLBANKS.

APPARATUS FOR TEACHING SPELLING.

No. 189,535.

Patented April 10, 1877.



WITNESSES
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UNITED STATES PATENT OFFICE.

DAVID A. WILLBANKS, OF MONROE, GEORGIA.

IMPROVEMENT IN APPARATUS FOR TEACHING SPELLING.

Specification forming part of Letters Patent No. 189,535, dated April 10, 1877; application filed September 30, 1876.

To all whom it may concern:

Be it known that I, DAVID A. WILLBANKS, of Monroe, in the county of Walton and State of Georgia, have invented a new and valuable Improvement in Instructors; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse vertical section of my instructor. Fig. 2 is a front elevation of the same, and Fig. 3 is a detail view thereof.

The object of this invention is to facilitate instruction in the alphabet and numerals. This result is accomplished by the use of a series of keys, levers, and vertically-sliding arms, each of said arms being provided with a character or characters, substantially as hereinafter set forth.

In the annexed drawings, A designates the casing of my device, said casing consisting of a vertical part, A¹, and a horizontal base part, A². In the face and at the back of the vertical part A¹ of said casing, at the top thereof, are downward-turning hinged shields or covers *a a*, which may be locked up by a pivoted double latch, *a'*, and on top and in front of said horizontal base part of said casing is a curved upward-turning cover, *a''*. Said casing and covers are constructed preferably of wood. Said upper covers *a a*, when closed, conceal the letter-slides hereinafter described, so long as said slides remain in their normal positions. Said lower cover *a''*, when down, conceals the operating-keys, hereinafter described.

B B designate a series of keys similar in construction and use to those of a piano or melodeon, and corresponding in number to the letters of the alphabet. Said keys are arranged under said lower cover, and above and in the rear of said keys is a long letter-strip, C, on which, opposite to each key, is placed the proper letter for designating the same, so that the operator may know precisely what letter will be exposed to view when any particular key is pressed.

Each one of said keys forms a part of a lever, D, which extends obliquely downward and backward, and is pivotally connected at its rear end to a vertically-sliding rod, E. Said rods pass up through the space inclosed by

the vertical rear part A¹ of casing A, and are guided by a horizontal perforated guide-plate or guide-board, F, at the top of said space, and through the perforations *f* in which guide-plate or guide-board the said vertical rods E pass. Each of said rods carries on its upper end a detachable metal or other slide, G, to which is attached, or on which is marked, a letter or number corresponding to that marked opposite the said key. Levers D are pivoted upon a rod, *d*, (shown in cross-section in Fig. 1,) so that whenever any key is pressed its letter rises. When the said pressure is removed the letter-slide G falls by gravity.

To economize space said letter-slides G are arranged in two rows, the slides in each row or series alternating with those in the other row or series.

Each slide may have letters marked upon both sides of it, or more than one letter or combination of letters on the same side or both. Letters may also be marked on the keys instead of above them. Other characters may also be substituted for letters, if desired, or used in connection therewith.

The slides may be permanently attached to their arms, or removable, as preferred. Each of the keys may be in one piece with its lever, or otherwise, if desired. Various other changes may be made without departing from the spirit of my invention.

This instrument is especially designed to facilitate the teaching of classes of children, but may be employed for teaching mutes or classes of illiterate adults (not mutes) as well.

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

1. The combination of a series of keys, B, with a series of levers, D, a series of vertically-sliding rods, E, and a series of letter-slides or letter-plates, G, substantially as set forth.

2. The combination of a key, B, a lever, D, a vertical rod, E, a letter-slide or letter-plate, G, and a perforated guide-board or guide-plate, F, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DAVID A. WILLBANKS.

Witnesses:

W. H. CARITHERS,
JAMES M. BRADLEY.