(No Model.)

J. F. POAGE.

KEY BOARD FOR VIOLINS.

No. 357,409. Patented Feb. 8, 1887.

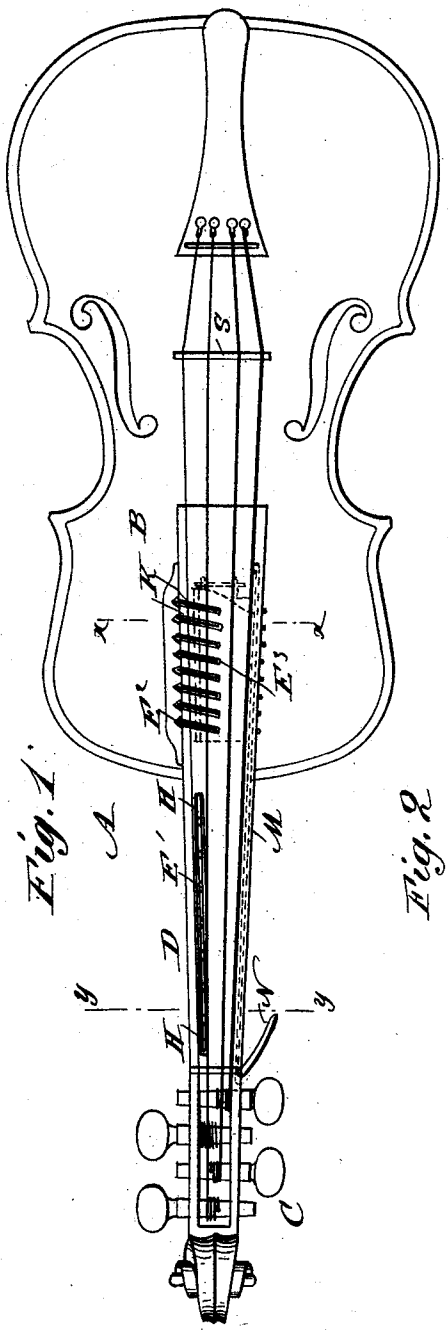

Fig. 1.

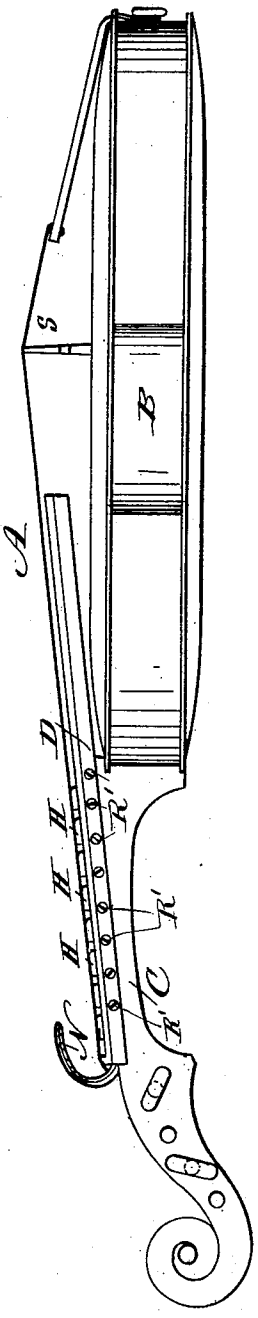

Fig. 2.

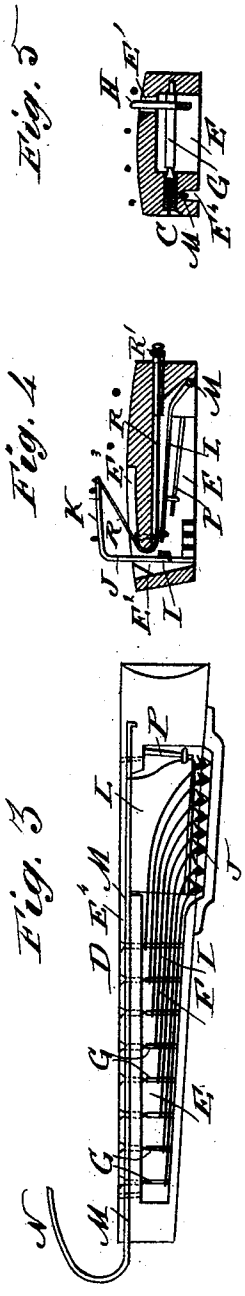

Fig. 3.

Fig. 4.

Fig. 5.

WITNESSES:

C. Neveux

C. Sedgwick

INVENTOR:

J. F. Poage

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES F. POAGE, OF LA PLATA, MISSOURI.

KEY-BOARD FOR VIOLINS.

SPECIFICATION forming part of Letters Patent No. 357,409, dated February 8, 1887.

Application filed April 14, 1886. Serial No. 198,806. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. POAGE, of La Plata, in the county of Macon and State of Missouri, have invented a new and Improved Key-Board for Violins, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved key-board for violins to enable the performer to produce harmonic high tones without great difficulty.

The invention consists of an improved key-board and of various parts and details and combinations of the same, as hereinafter more fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a violin provided with my improvement. Fig. 2 is a side elevation of the same. Fig. 3 is a bottom view of the key-board. Fig. 4 is a cross-section on the lines *x x* of Fig. 1, and Fig. 5 is a cross-section on the lines *y y* of Fig. 1.

The violin A is provided with the body B, of the usual construction, and with the neck C, to which is attached my improved key-board D. The other parts of the violin are similar in every respect to those now used on violins.

The neck C is provided with a recess, E, in which are placed the finger-keys F, each consisting of the shaft G, pivoted in any suitable manner to the neck C, and provided with the finger-arm H, which projects upward through a recess, E′, formed in the neck C between the E and A strings of the violin. To the shaft G is also attached the arm I, which is slightly bent on its lower end, to which is secured the vertical arm J, passing upward through a recess, E^2, in the neck C, and connected with the angular string key or fret K, which rests in its normal position in a transverse groove, E^3, formed in the neck C and directly under the E and A strings of the violin.

In the lower part of the recess E is placed the stop-plate L, which rests in its normal position on the top edge of the lower part of the arm I, and is attached to the rod M, turning in a recess, E^4, in the neck C, and provided on its upper end with the outwardly-flaring thumb-key N.

The plate L is held in its normal position on the top edge of the arms I by the spring P, connected with one end to the plate L, the other end being attached to the neck C.

To the outer end of each of the string keys or frets K is attached a string, R, which is drawn taut by being secured on an adjustable screw, R′, working in one side of the neck C. It will be seen that when the frets K are raised then the string R will be stretched and the frets K are strained, so that when released from their raised position they return to their normal places in the grooves E^3.

The operation is as follows: In the normal position of the key-board, as shown in Figs. 1 and 2, the performer can play on the violin in the usual manner; but whenever he desires to play a certain harmonic high tone he presses with his thumb against the thumb-key N, which throws the stop-plate L upward away from the arms of the finger-keys F, and by pressing with one of the other fingers on one of the finger-arms H, and also with the same finger on one of the violin-strings, it causes the arm I to swing upward, so that the respective string key or fret K is also moved upward and touches lightly the E and A strings of the violin at a point half-way between where it is pressed by the finger and the bridge S, whereby the value of the tone of the E and A strings changes accordingly to the distance of the lifted string key or fret K from the bridge S. As soon as the pressure on the finger-arm H is released the finger-key F will return to its normal position by the action of the string R, as before described, and as soon as the pressure on the thumb-key N is released the spring P causes the stop-plate L to return to its former position on the top of the arms I by the action of the springs.

Harmonics of twelfths, double octaves, &c., may be produced by making the finger-keys F longer or shorter.

The frets K may be padded with some soft material, if deemed necessary.

This finger-board may also be used with great advantage on violins, violoncellos, &c.

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

1. A violin provided with a key-board hav-

ing pivoted finger-keys and a stop-plate, substantially as shown and described.

2. In a key-board, the combination of pivoted finger-keys with a pivoted stop-plate, substantially as shown and described.

3. In a key-board, the combination of the pivoted finger-keys F, each consisting of the shaft G, the finger-arm H, the arm I, the vertical arm J, and the string key or fret K, with the string R, attached to the outer end of each string-key K, fastened to the screw R′ on the neck C of the violin, substantially as shown and described.

4. In a key-board, the stop-plate L, the rod M, and the thumb-key N, combined with the spring P, connected with the plate L and attached to the neck of the violin, substantially as shown and described.

JAMES F. POAGE.

Witnesses:
J. D. FORSYTHE,
M. E. FORSYTHE.