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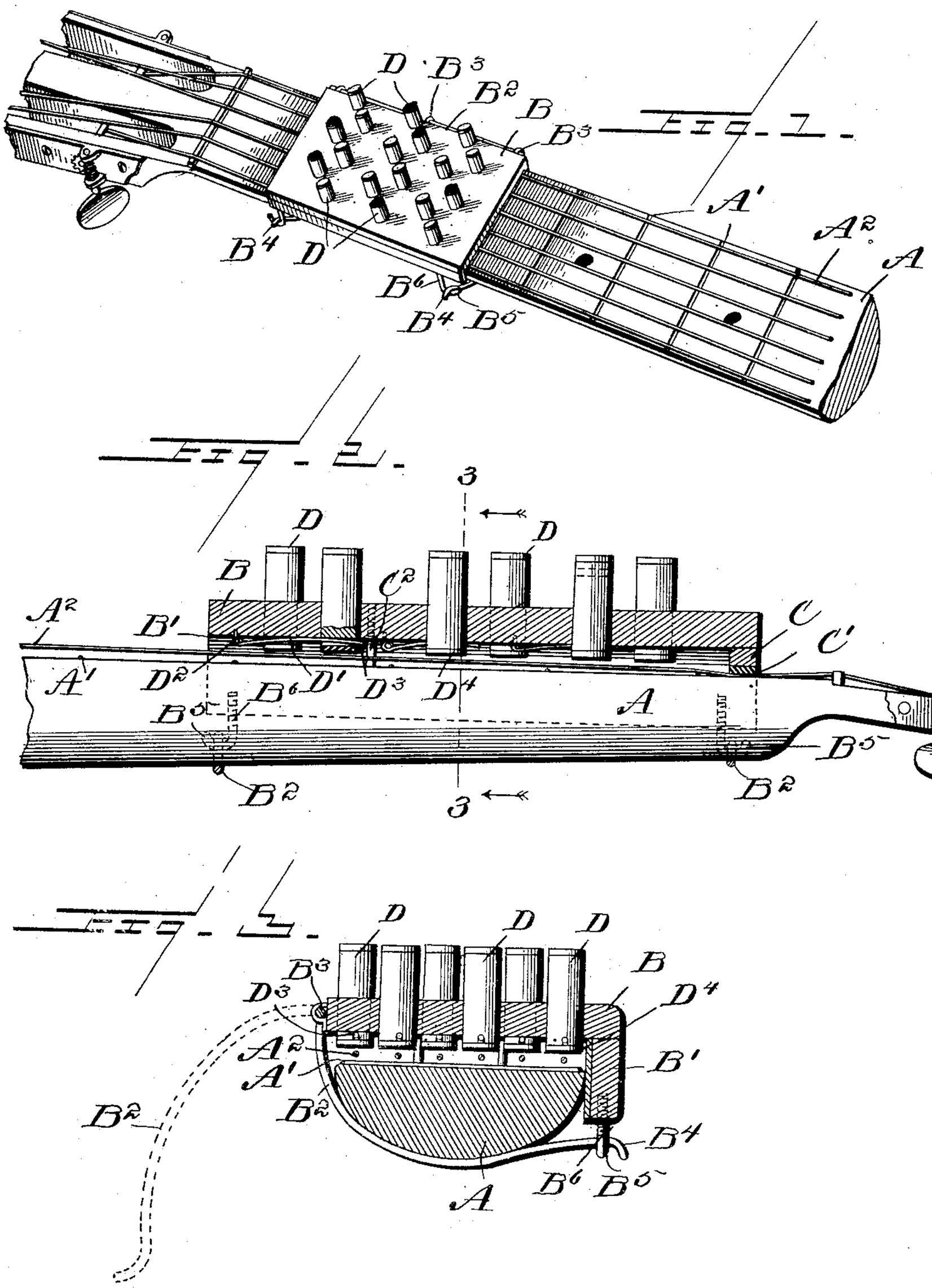
F. G. BAKER.

KEYBOARD ATTACHMENT FOR STRINGED INSTRUMENTS.

APPLICATION FILED JULY 24, 1903.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FLORENCE GRAY BAKER, OF ASHEVILLE, NORTH CAROLINA.

KEYBOARD ATTACHMENT FOR STRINGED INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 745,557, dated December 1, 1903.

Application filed July 24, 1903. Serial No. 166,869. (No model.)

To all whom it may concern:

Be it known that I, FLORENCE GRAY BAKER, a citizen of the United States, residing at Asheville, in the county of Buncombe, State of North Carolina, have invented certain new and useful Improvements in Keyboard Attachments for Stringed Instruments, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a keyboard attachment for stringed instruments, and particularly to a structure for application to the neck or finger-board of the instrument.

The invention has for an object to provide a construction in which a limited movement of the key carried by the keyboard is secured to contact with the string, and at the same time a capo-tasto effect is produced by a bar carried upon the keyboard for that purpose.

A further object of the invention is to provide means for connecting the keyboard to the neck of the instrument by which the tension thereof may be regulated, so as to secure the desired pressure upon the capo-tasto bar, while by the adjustment of this attaching means the keyboard may be moved and held in any desired position upon the neck of the instrument.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings, Figure 1 is a perspective of the invention applied to the neck of a stringed instrument. Fig. 2 is a side elevation thereof with the keyboard in section, and Fig. 3 is a vertical section on the line 3 3 of Fig. 2.

Like letters of reference refer to like parts in the several figures of the drawings.

The letter A designates the neck of a stringed instrument—for instance, a guitar—which is provided with the usual fret-bars A′ and strings A^2, held under tension in the ordinary manner. Upon this neck the detachable keyboard B is applied in any desired position longitudinally thereof, and for the purpose of securing the board in position a side bar B′ is secured to the board and adapted to contact with one side of the neck A, while at the opposite side of the board a spring-arm B^2, curved to conform to the under face of the neck, is pivotally mounted by means of ears B^3. The free end of this arm is turned downward, as at B^4, and adapted to engage above the horizontal arm B^5 of an adjustably-mounted latch B^6, which in the present instance comprises a threaded shaft mounted in the side bar B′, so that by rotating the latch the distance of the arm B^5 thereof from the under face of the side bar B′ may be adjusted so that the spring-arm will place the proper tension upon the keyboard. This keyboard is provided at one end with a capo-tasto bar C, which is provided with a cushion C′, adapted to contact with the strings to produce the desired capo-tasto effect in the use of the instrument. For the purpose of supporting the opposite end of the keyboard at a relative distance from the neck adjustable feet C^2 are provided, preferably threaded into the body of the keyboard, so that by rotation they may be shortened or lengthened to support that end of the board relative to the capo-tasto bar.

Mounted in the apertures in the keyboard B are any desired number of keys D, which are normally held in their raised position by means of springs D′, secured at one end D^2 to the under face of the keyboard and having the free end thereof D^3 extended through apertures in the lower portion of the keys D, while the under face of each of these keys is provided with a cushion or contact block D^4, adapted to rest upon the strings of the instrument. These strings being carried by the under face of the bar occupy the minimum amount of space and permit the location of the keyboard in very close relation to the neck of the instrument, so that only a short throw of the keys D is required. The upper ends of these keys may be provided with any desired characters, so that the user of the instrument can readily determine the string acted upon by the particular key and the note or tone produced in the depression thereof. If desired, some of the caps of these keys may be of different colors from the others, as indicated in Fig. 1, in order readily to disclose the keys necessary for producing different tones or combinations of the same.

In the application of the keyboard to the instrument the spring-arms are swung to one side, as shown by dotted lines in Fig. 3, while

the latches are turned with the horizontal portion thereof parallel with the arms. The arms are then closed into contact with the under face of the neck, while the latches are turned to bring the horizontal portion transverse to the ends of the arms, and thus securely hold the keyboard in position upon the neck, which is also facilitated by means of the adjustable character of the latches, by which the proper tension upon the arms is secured in order to hold the capo-tasto bar in firm contact with the strings at one end of the keyboard, the opposite end of which is supported by the adjustable feet. When the keyboard is thus applied, it will be seen that the keys have only a short travel in order to contact with the strings of the instrument, above which they are arranged in proper relative position for fingering. It will be observed that these keys contact with the strings by a direct downward movement, and owing to the limited surface of the key in contact with the string a free, easy, and correct fingering is effected, thus producing perfect and clear tones, which are very difficult to effect in the ordinary fingering of an instrument. It will also be seen that this keyboard permits the accurate fingering of the strings, so as to produce a pure, sharp, and clearly-defined tone as the point of contact relative to the capo tasto and fret bar is absolutely determined. The keyboard also provides very simple means for teaching the playing of the instrument, by which the learner can instantly determine the proper key to be operated, while the keyboard may also be adjusted longitudinally of the neck of the instrument to effect different combinations of notes, and when it is desired to slide the keyboard upon the neck during the playing of the instrument the latch is released or loosened to a sufficient extent to permit the free movement of the keyboard above the strings and frets.

It will be obvious that changes may be made in the details of construction and configuration without departing from the spirit of the invention as defined by the appended claims.

Having described my invention and set forth its merits, what I claim, and desire to secure by Letters Patent, is—

1. A keyboard, keys slidably mounted therein, restoring-springs secured to the under face of the board and having their free ends disposed within an aperture upon the lower face of each of said keys, cushion-blocks for covering said springs and apertures, and projections upon the under face of the keyboard for supporting the same above the strings of the instrument.

2. In a keyboard, keys mounted therein, projections upon the under face of the keyboard for supporting the same above the strings of an instrument, a side bar carried at one side of the keyboard, a spring-arm pivotally secured upon the keyboard at the opposite side thereof, and an adjustable rotatable latch mounted upon the side bar and provided with a laterally-disposed arm for engaging the said spring-arm.

3. In a keyboard, keys mounted therein, an adjustable projection upon the under face of the keyboard at one end for supporting the same above the strings of an instrument, a depending side bar carried at one side of the keyboard, pivoted spring-arms secured to the other side of the keyboard at its ends, a capo-tasto bar disposed transversely upon the under face of the keyboard at the end opposite the projection thereon, and adjustable latches having lateral arms and threaded at one end into the side bar for determining the tension upon and engaging said spring-arm.

4. A keyboard, a series of straight keys slidably mounted therein to contact at their lower ends with the strings of an instrument, restoring-springs carried by the under face of said keyboard for elevating the keys, a capo-tasto bar at one end of said keyboard, supporting-feet at the opposite end of the under surface of said keyboard, a side bar at one side of said keyboard, a spring-arm pivotally mounted at the opposite side thereof, and an adjustable, rotatable latch mounted in the under face of said side bar to engage the free end of said arm.

In testimony whereof I affix my signature in presence of two witnesses.

FLORENCE GRAY BAKER.

Witnesses:
J. H. WEAVER,
CECILE CUTTER.