S. ULBRICH.

VIOLIN MUTE.

APPLICATION FILED APR. 20, 1908.

911,853. Patented Feb. 9, 1909.

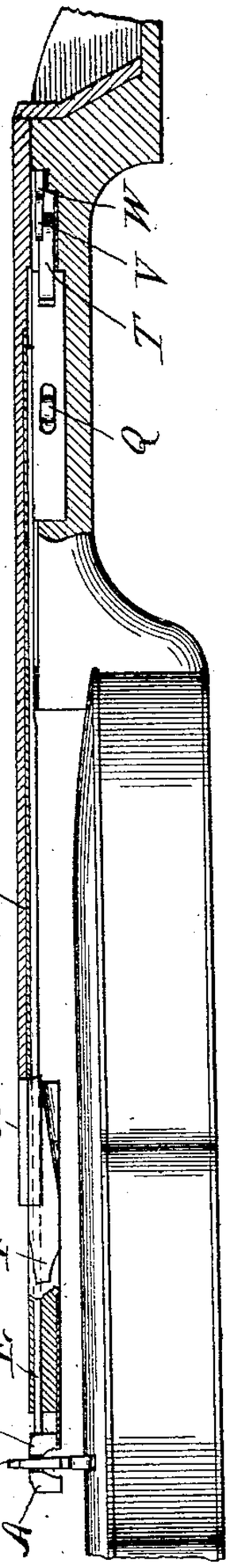

Fig. 1.

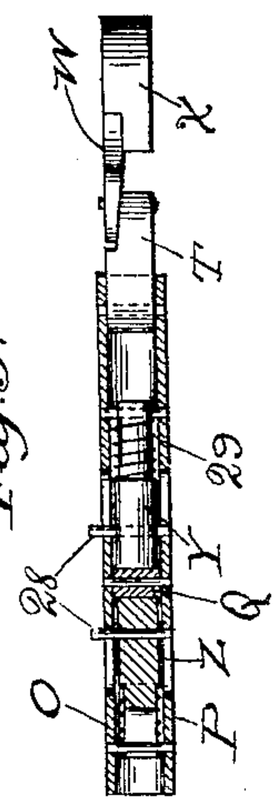

Fig. 5.

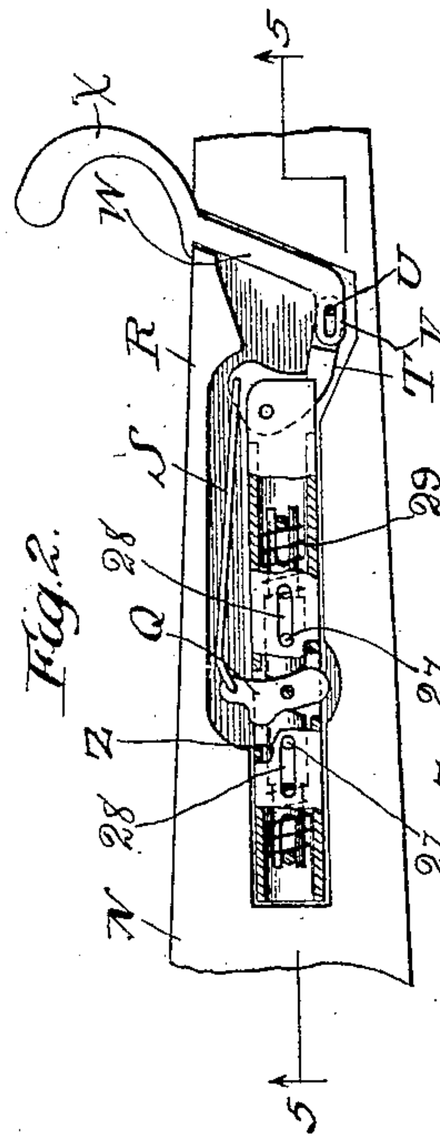

Fig. 2.

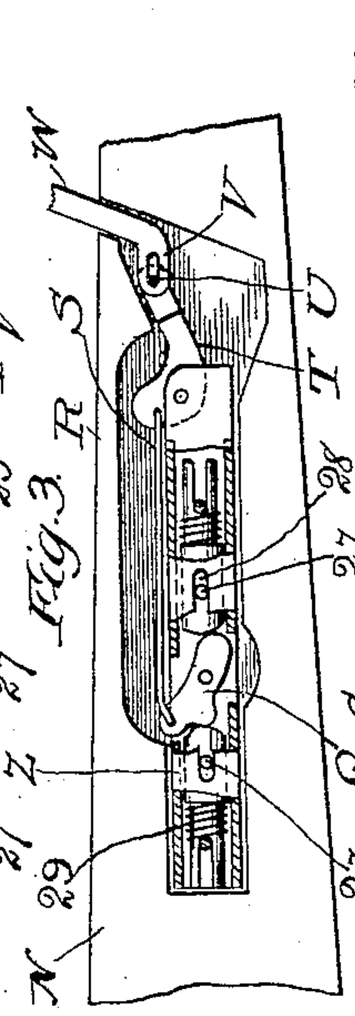

Fig. 3.

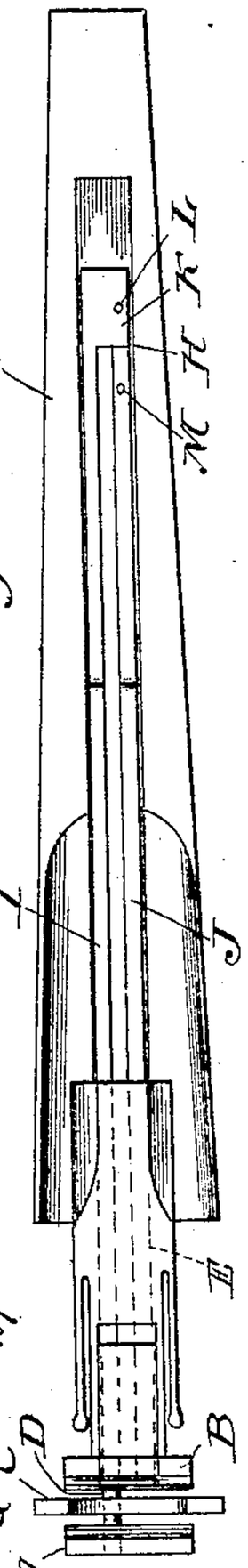

Fig. 4.

Witnesses
Ray. White.
M. H. Olsen.

Inventor
Samuel Ulbrich
By Rudolph Lee Lotz Atty.

UNITED STATES PATENT OFFICE.

SAMUEL ULBRICH, OF CHICAGO, ILLINOIS.

VIOLIN-MUTE.

No. 911,853. Specification of Letters Patent. Patented Feb. 9, 1909.

Application filed April 20, 1908. Serial No. 428,037.

To all whom it may concern:

Be it known that I, SAMUEL ULBRICH, subject of the Emperor of Austria-Hungary, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Violin-Mutes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a novel construction in a mute for violins or other string instruments, the object being to provide a device adapted to soften the tone which is permanently mounted on the instrument, and may be operated by the player without interrupting his performance, and consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings illustrating this invention: Figure —1— is a fragmentary central longitudinal section of the neck of a violin equipped with a mute constructed in accordance with my invention. Fig. —2— is a plan view of the neck, the finger board being removed and showing the mute operating mechanism in elevation, the upper plate of the latter being partly broken away. Fig. —3— is a view similar to Fig. —2— and showing the operating mechanism in the position in which the mute shoes are thrown into contact with the bridge. Fig. —4— is a bottom plan view of the finger board removed from the neck and showing the manner of connecting the mute shoes with the operating mechanism. Fig. —5— is a detail longitudinal section on the line 5—5 of Fig. —2—, the neck and finger board being removed.

The main object of the present invention is to provide means for softening the tone of a string instrument which may be operated without necessitating interruption of the performance by the player. To this end I provide shoes A and B of any suitable material disposed on opposite sides of the bridge C of a violin or other instrument, and equidistant therefrom, said shoe A being disposed upon the end of a rod D passing freely through openings in the bridge C and shoe B respectively and the latter being disposed upon the end of a rod E parallel with said rod D. Said rods D and E pass longitudinally through the longitudinal openings in the extension F of the finger board G, the latter being provided between its ends with a longitudinal recess H in its lower face in which lie two flat parallel strips I and J of any suitable material which may be integral with or are connected at one end with the rods D and E respectively. The strip I is of greater length than the strip J and is provided at its free end with lateral projections K in which is a perforation L disposed in alinement with the perforation M in the free end portion of the strip I.

The neck of the instrument is provided in its upper face with a recess in which is disposed the mechanism for operating said shoes, said mechanism comprising a frame consisting of two parallel top and bottom plates O and P respectively suitably connected together and between which a cam Q is pivotally mounted substantially midway between the ends of said plates O and P, said cam being substantially a double eccentric and being provided with a projection R at one end which is connected by means of the connecting rod S with the free end of one arm of a bell-crank lever T pivotally secured at its elbow portion between said plates O and P at one end of said frame. The other arm of said lever T carries a pin U which enters the longitudinal slot in the projection V of the plunger W which is disposed at an incline and lies within an inclined recess in said stem, the free end of said plunger carrying a hook X by means of which the same is reciprocated to turn said cam Q through the interposition of said bell-crank lever T in an obvious manner. Plungers Y and Z are longitudinally movable between said side plates O and P, each carrying a pin 27 passing through longitudinal slots 28 in the upper plate O said pins entering said perforations L and M in said strips I and J respectively. Said plungers are normally maintained in contact at their opposing ends with said cam Q by means of the spiral compression springs 29 disposed in operative relation thereto in any suitable manner and when said plunger W is moved to the position shown in Fig.—3—said plungers Y and Z are moved away from each other against the action of said springs 29. By this means reciprocating movement in opposite directions is imparted to said strips I and J and thereby to said shoes A and B thus moving the latter into contact with opposite faces of the bridge C and serving to damp the

vibrations of the latter and thus soften the tone of the instrument. The said shoes may be lined on their contact faces with flannel, leather or other suitable material and similar sound deadening materials may be employed to line the recess in which the operating mechanism is disposed. When the plunger W is moved to the position shown in Fig.—2—, the pressure of the plungers Y and Z is exerted thereon in a direction substantially in alinement with the pivot of said cam thereby preventing such pressure from returning the cam to its previous position until the performer operates the plunger W. The hook of the latter is so disposed as not to interfere with the free play of the hand and fingers on the neck and finger-board, and is adapted to be engaged and easily operated by the player's thumb.

My said device is simple and efficient and enables the player to more efficiently shade his tones without necessitating interruption of his performance.

I claim as my invention:

1. A violin having a bridge, a mute comprising shoes disposed on opposite sides of said bridge and movable toward and away from the same, means disposed in the neck of the instrument and operatively connected with the said shoes to impart movement thereto, and means disposed within reach of the player's hand for actuating said operating means.

2. A violin having a bridge, a mute comprising shoes disposed on opposite sides of said bridge and movable toward and away from the same, means disposed in the neck of the instrument and operatively connected with the said shoes to impart movement thereto, and means disposed within reach of the player's hand for actuating said operating means, the latter including spring actuated plungers, and a cam disposed in operative relation to said plungers to impart movement thereto simultaneously in opposite directions.

In testimony whereof I have signed my name in presence of two subscribing witnesses.

SAMUEL ULBRICH.

Witnesses:
RUDOLPH WM. LOTZ,
E. L. MOORE.