

Jan. 15, 1946.

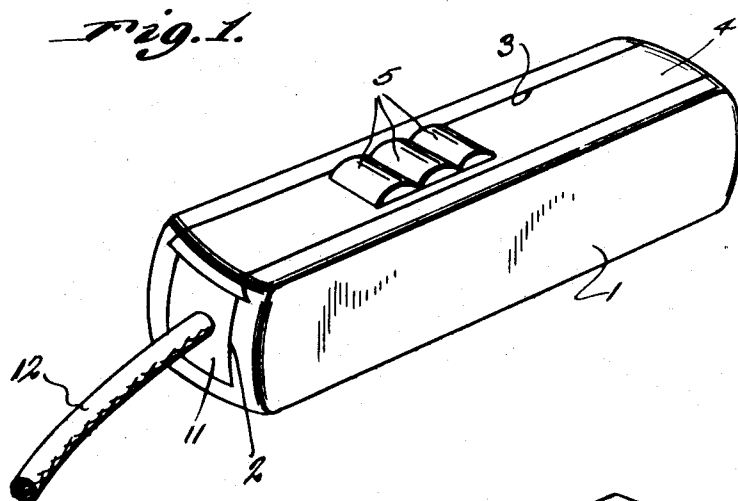
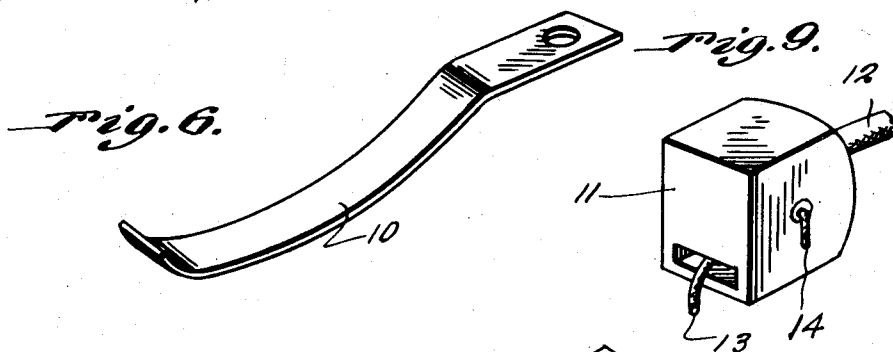
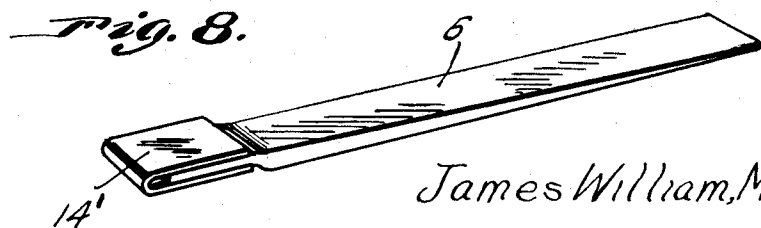
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2,392,937

HAWAIIAN ELECTRIC GUITAR STEEL

Filed Feb. 25, 1944

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 2.

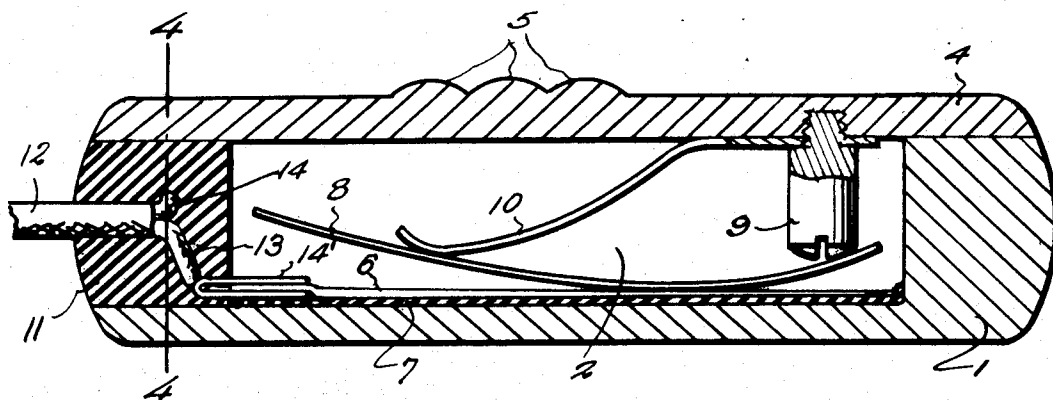


Fig. 3.

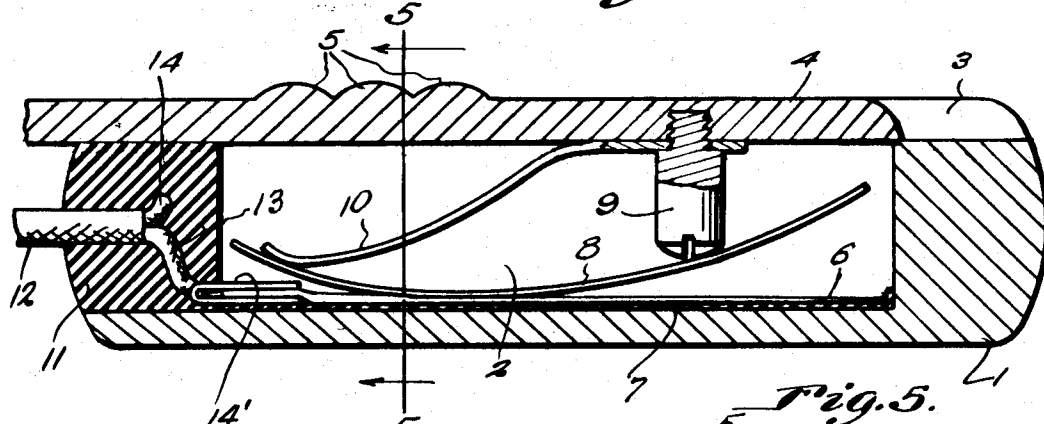


Fig. 5.

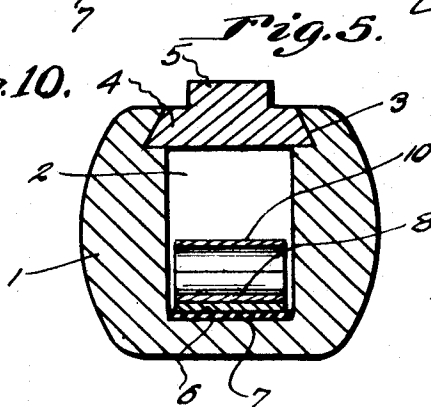
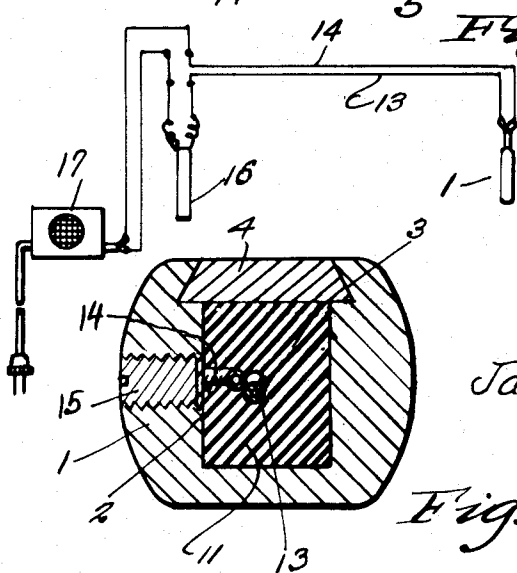


Fig. 10.



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Fig. 4.

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UNITED STATES PATENT OFFICE

2,392,937

HAWAIIAN ELECTRIC GUITAR STEEL

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Application February 25, 1944, Serial No. 523,875

3 Claims. (Cl. 201-75)

The present invention relates to new and useful improvements in steels for Hawaiian electric guitars, and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character comprising novel means whereby the flow of current magnetic pick-up of the instrument to the amplifier may be conveniently regulated, thus permitting the volume to be controlled as desired.

Other objects of the invention are to provide an Hawaiian electric guitar steel of the aforementioned character which will be comparatively simple in construction, durable, efficient in operation, compact and which may be manufactured at low cost.

All of the foregoing, and still further objects and advantages of the invention, will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a bottom perspective view of a steel constructed in accordance with the present invention.

Figure 2 is a view in longitudinal section through the device, showing the slide in its forward position.

Figure 3 is a longitudinal sectional view, showing the slide in its rear position.

Figure 4 is a cross sectional view, taken substantially on the line 4-4 of Figure 2.

Figure 5 is a cross sectional view, taken substantially on the line 5-5 of Figure 3.

Figure 6 is a detail view in perspective of the slidable spring which engages the rockable contact.

Figure 7 is a detail view in perspective of the rockable contact.

Figure 8 is a detail view in perspective of the carbon resistance element.

Figure 9 is a detail view in perspective of the removable conductor wire connecting plug.

Figure 10 is a diagrammatic view of the electric circuit.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a bar 1 of suitable metal. Extending into the bar 1 from its rear end to a point in spaced relation to its forward end is a groove or channel 2. The bar 1 is further provided on its front side with a dovetail groove 3 which extends from end to end of said bar and which communicates with the channel 2. A thumb-actuated slide 4 is oper-

able in the groove 3 and functions as a closure for the channel 2. The slide 4 is provided at an intermediate point with ribs or the like 5 to facilitate actuating said slide with the thumb of the hand which holds the bar 1.

Mounted longitudinally in the inner portion of the channel 2 is a substantially wedge-shaped or tapered paper carbon resistance 6. The resistance 6 is insulated at 7 from the bar 1. An arcuate, rockable contact strip 8 is operable on the resistance 6 in the channel 2. A screw 9 secures a spring 10 on the slide 4 in the channel 2. The screw 9 and the spring 10 are operable on the end portions of the contact 8 for rocking said contact on the resistance 6.

Mounted in the rear end portion of the channel 2 is a removable insulating plug 11 on one end of a conductor cord 12. One of the wires 13 of the cord 12 is electrically connected to the resistance 6 through the medium of a clip 14. The other wire 14 of the cord 12 is grounded to the bar 1 by a screw 15 which also secures the plug 11 in position.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. Briefly, upon reciprocation of the slide 4 with the thumb of the hand which holds the bar 1, the screw 9 and the spring 10 are moved longitudinally on the end portions of the arcuate contact 8, thus rocking said contact forwardly or rearwardly on the paper resistance 6. With the contact 8 in the position shown in Figure 2 of the drawings, all of the current is permitted to flow from the usual magnetic pick-up 16 (see Fig. 10) of the instrument to the amplifier 17 and the volume is on full. However, as the slide 4 is moved rearwardly the current to the amplifier 17 is progressively reduced until the contact 8 has been rocked to the position of Figure 3, in which position the volume is completely shut off.

It is believed that the many advantages of an electric Hawaiian guitar steel constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A guitar steel of the character described comprising a bar having a longitudinal channel therein, an electric resistance in the channel and insulated from the bar, a manually actuated slide operable on the bar, an arcuate contact rockable on the resistance in the channel, said slide being

movable longitudinally of the bar and the contact, and means on the slide slidably engaging said contact for rocking the latter in opposite directions.

2. A guitar steel of the character described comprising a bar having a longitudinal channel therein, an electric resistance in the channel and insulated from the bar, a manually actuated slide operable on the bar, an arcuate contact rockable on the resistance in the channel, said slide being movable longitudinally of the bar and the contact, and means on the slide slidably engaging said contact for rocking the latter in opposite directions, said means including a spring mounted on the slide and slidably engaged with one end portion of the contact, and a screw securing said spring to the slide and slidably engaged with the other end portion of the contact.

3. An electric Hawaiian guitar steel comprising

a metallic bar having a longitudinal channel extending thereinto from one end thereof, said bar further having a dovetail groove therein communicating with the channel, an electric resistance mounted longitudinally in the channel and insulated from the bar, an arcuate contact rockable on the resistance in the channel, a manually operable slide mounted for reciprocation in the groove longitudinally of the bar and the contact, a spring mounted on the slide and slidably engaged with one end portion of the contact, a screw mounted on the slide and constituting means for securing the spring thereto, said screw being slidably engaged with the other end portion of the contact, said screw and said spring constituting means for rocking the contact in opposite directions on the resistance.

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