April 30, 1957 R. W. BRIMHALL 2,790,344

CHORD PLAYING ATTACHMENT FOR STRINGED MUSICAL INSTRUMENTS

Filed June 11, 1954

2 Sheets-Sheet 1

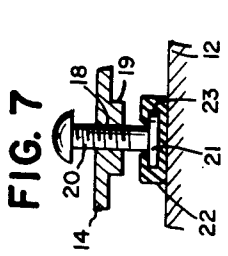


FIG. 7

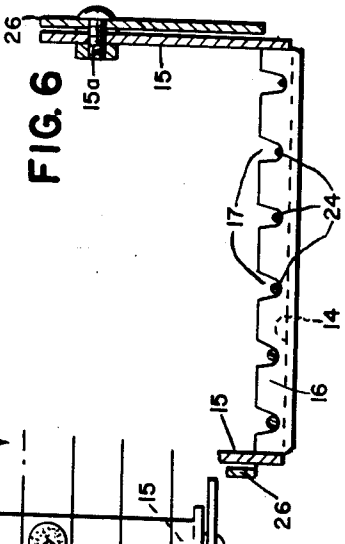


FIG. 6

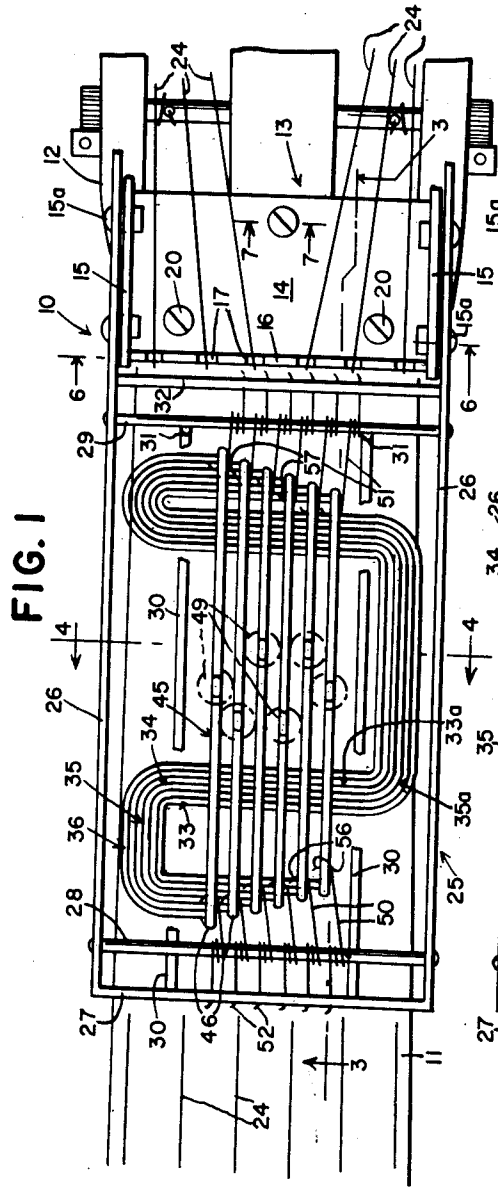


FIG. 1

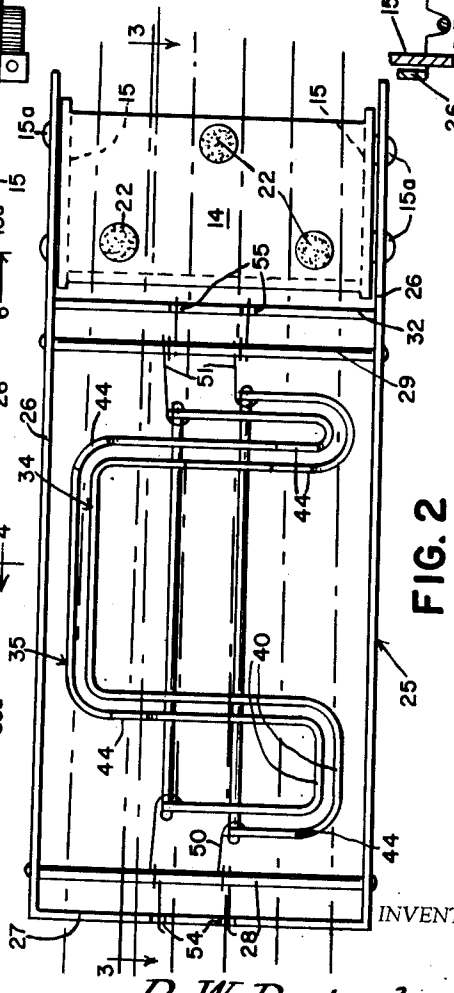


FIG. 2

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CHORD PLAYING ATTACHMENT FOR STRINGED MUSICAL INSTRUMENTS

Filed June 11, 1954 2 Sheets-Sheet 2

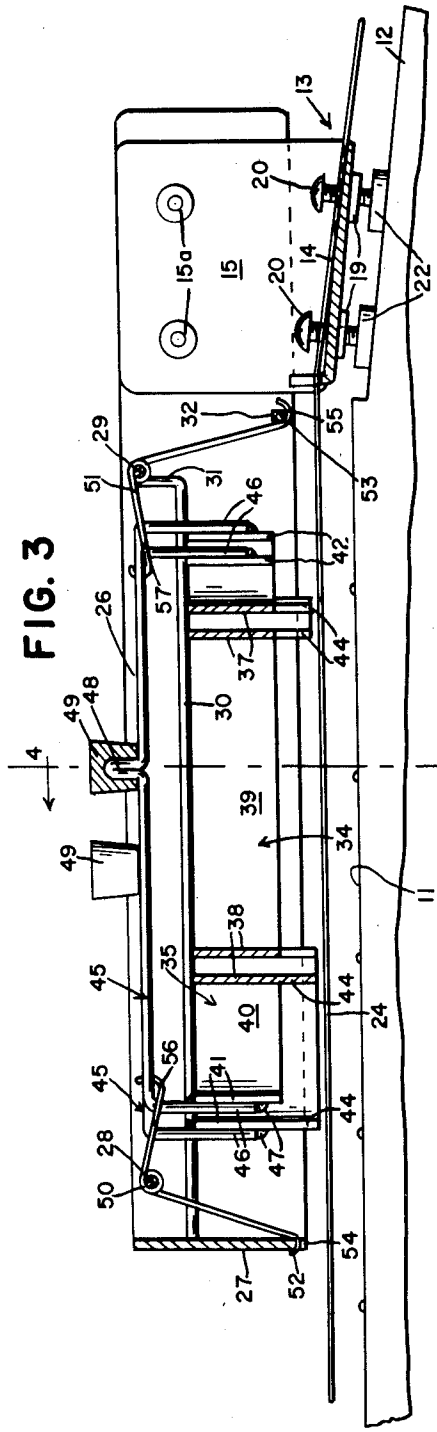


FIG. 3

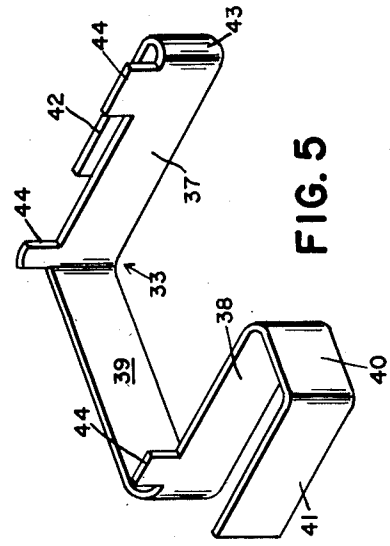


FIG. 5

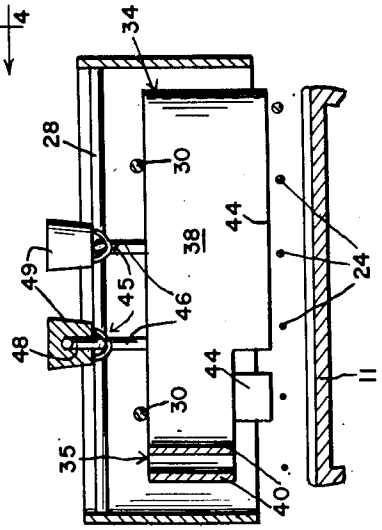


FIG. 4

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2,790,344

CHORD PLAYING ATTACHMENT FOR STRINGED MUSICAL INSTRUMENTS

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Application June 11, 1954, Serial No. 436,170

5 Claims. (Cl. 84—317)

This invention relates to a novel attachment for stringed musical instruments, such as guitars, mandolins, banjos and ukuleles, by means of which chords may be accurately played.

More particularly, it is an aim of the present invention to provide such a chording attachment offering full harmonization in the playing of a maximum number of chords due to the unique construction of the device whereby the individual chord playing elements do not interfere with one another.

More particularly, it is an object of the present invention to provide novel chord playing elements of unique construction and shape whereby a maximum number of the elements may be assembled in a nested relationship relatively to one another and readily depressed individually for playing different chords.

A further object of the invention is to provide a chording device wherein the individual string depressing or chord playing elements cooperate with one another in that the movement of each element toward and away from the finger board is guided by one or more of the other elements.

Still a further object of the invention is to provide a novel means for detachably and adjustably mounting the chording device on the tuning key mounting head of a stringed musical instrument for supporting the chord depressing elements thereof over the finger board and in such a manner that the instrument will not be damaged or marred by use of the chording attachment.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a top plan view of a portion of a conventional stringed musical instrument and showing the attachment applied thereto;

Figure 2 is a fragmentary bottom plan view of the attachment;

Figure 3 is an enlarged fragmentary longitudinal sectional view, partly in elevation, taken substantially along a plane as indicated by the line 3—3 of Figures 1 and 2;

Figure 4 is an enlarged fragmentary cross sectional view taken substantially along a plane as indicated by the line 4—4 of Figures 1 and 3;

Figure 5 is a perspective view looking toward the underside of one of the string depressing elements;

Figure 6 is an enlarged fragmentary detail cross sectional view taken substantially along a plane as indicated by the line 6—6 of Figure 1 and illustrating a portion of the chording attachment, and

Figure 7 is a fragmentary sectional view on an enlarged scale, taken substantially along a plane as indicated by the line 7—7 of Figure 1.

For the purpose of illustrating a preferred application and use of the chord playing device, designated generally 10 and comprising the invention, a portion of a stringed musical instrument has been illustrated in the drawings,

including a portion of the fretted finger board 11, which is located adjacent the tuning key mounting head, and said adjacent portion 12 of the tuning key mounting head.

The chording device 10 includes a mounting section, designated generally 13, comprising an elongated strip of metal having an intermediate bottom portion 14 and upturned end portions forming substantially parallel walls 15. The bottom portion 14 is provided with an upturned edge 16, which extends between the walls 15 and which is provided with upwardly opening notches 17, as best illustrated in Figure 6. Said bottom 14 is provided with three spaced threaded openings 18 which extend therethrough and through depending bosses 19 of the bottom 14, as best seen in Figure 7. A screw 20 extends through and threadedly engages each threaded bore or opening 18 and is provided with a head at its upper end and with an enlargement 21 at its lower end. Each enlargement is swivelly mounted in and connected to a pad 22 which is provided with a socket 23 for receiving the enlargement 21, and which socket is provided with a restricted open upper end. The enlargement 21 may be suitably secured to the lower end of the fastening 20 after it is passed through the threaded bore 18 and, if desired, after the pad 22 has been formed around said enlargement or before the latter operation is accomplished. The pads 22 are formed of a material which will not mar a musical instrument and are adapted to rest against the tuning key mounting head portion 13. The strings 24 of the musical instrument extend over the bottom portion 14, between the walls 15 and each string extends through a different one of the notches 17, so that the upturned flange 16 functions as a string divider. The upturned flange 16 is disposed approximately over the end of the finger board 11 which joins with the tuning key mounting head 13. It will be readily apparent that the pressure of the strings 24 will urge the mounting bracket 13 downwardly to retain the pads 22 thereof in tight frictional engagement against said head portion 12 and immovably with respect thereto when the strings are tensioned.

The chording attachment 10 includes an elongated supporting frame 25, preferably formed of a strip substantially rigid metal, having spaced substantially parallel longitudinally extending side walls 26, corresponding ends of which are joined by an end wall 27 of the frame 25 which extends between and merges at its ends with said ends of the side walls 26. The opposite, free ends of the side walls 26 straddle the walls 15 of the mounting bracket 13 and are each secured to the adjacent wall 15 by a plurality, preferably two fastenings 15*a*, such as nut and bolt fastenings, as best seen in Figure 6.

The bracket 13 in combination with the fastenings 15*a* support the frame 25 longitudinally over a portion of the finger board 11 and with the coplanar bottom edges of the walls 26 and 27 disposed above and spaced from the strings 24, as seen in Figures 3 and 4. A rod 28 extends between and is secured at its ends to the walls 26, near their upper edges and adjacent the end wall 27. Another rod 29 extends between and is supported by the side walls 26, adjacent their upper edges, and is disposed adjacent the mounting bracket 13. A pair of rods 30, forming stops, extend longitudinally of the frame 25 between and spaced from the walls 26 and from one another and having corresponding ends secured to the end wall 27 and upturned opposite ends 31 which are secured to the rod 29. A rod element 32 extends between and is secured at its ends to the side walls 26 near the bottom edges of said side walls and nearer the mounting bracket 13 than the rod 29. The rods 30 are disposed substantially above the rod element 32 but below the level of the rods 28 and 29.

The chord playing attachment includes a plurality of string depressed elements or strips, six of which, designated generally **33**, **33***a*, **34**, **35**, **35***a* and **36** have been illustrated in the drawings. Each of the strips or string depressing elements is formed from a relatively wide substantially rigid strip of a lightweight metal which is bent to provide substantially parallel transversely extending portions **37** and **38**, substantially parallel longitudinally extending portions **39** and **40** and substantially parallel end portions **41** and **42**. The parallel portions **37** and **38** are connected at corresponding ends thereof by the longitudinal portion **39** and the opposite end of the portion **38** is connected to one end of the end portion **41** by the longitudinally extending portion **40**. The opposite end of the portion **37** is connected to an end of the other end portion **42** by a bend **43**. Each of the string depressing strips **33**, **34**, **35** and **36** includes portions corresponding to the portions **37** to **43** of the strip **33**, except that the portions of the different strips are of different lengths, as clearly illustrated in Figure 1. Furthermore, for the purpose of clarity only four of the string depressing strips has been illustrated whereas the attachment **10** is adapted to include a substantially greater number of said strips, as for example twelve or more of the string depressing strips. Twelve of the string depressing strips constitute a sufficient number for a complete harmonization in three musical keys. Furthermore, the strips have been substantially exaggerated as to their thickness and as to the spacing therebetween and said strips will normally be relatively thin and will be disposed in close fitting engagement with one another when assembled in nested relationship, as illustrated in Figure 1.

The bottom edges of the different string depressing strips are cutaway or recessed to provide between said recesses depending string engaging lugs **44**. The lugs **44** of the different strips are located in different portions of said strips and are of varying lengths for engagement with different ones of and different portions of the strings **24**, as illustrated in Figures 2, 3 and 4. The lugs **44** of each strip are arranged to play a selected musical chord.

Each of the strips is carried by a rod **45**, constituting a bail having downturned ends **46** which are disposed on the outer sides of and secured to the free end portions of the strip ends **41** and **42**, in any suitable manner as by soldering or welding, as indicated at **47**. The substantially straight horizontal top portions of the bails **45**, which are disposed above and spaced from the upper edges of the string depressing strips, are each provided with an upstanding folded portion **48** on which is secured a depressing button **49**. The upstanding fold portions **48** are arranged in staggered relationship for spacing the adjacent buttons **49**, as best seen in Figure 1.

A plurality of springs **50** are mounted on the rod **28** and a plurality of springs **51** are mounted on the rod **29**. Each spring **50** and **51** comprises a strand of spring wire having an intermediate portion wound several times about the rod **28** or **29**. The springs **50** have corresponding downwardly extending ends which are turned outwardly and upwardly as seen at **52** and which are anchored to the end wall **27** by engagement therebeneath. The springs **51** likewise have depending ends which are turned outwardly and upwardly as seen at **53** and anchored under the rod element **32**. The spring ends **52** and **53** preferably engage notches **54** and **55** in the wall **27** and rod element **32**, respectively, by which said springs are retained against sliding movement on the rods **28** and **29**. The springs have opposite inwardly extending ends provided with upwardly opening hook portions **56** and **57** of said springs **50** and **51**, respectively, which engage under the top portions of the bails **45**. Complementary springs **50** and **51** engage the same bail **45**, so that each bail **45** is supported adjacent its ends by a spring **50** and a spring **51**, which springs urge the bails **45** and the string depressing strips, supported thereby, upwardly relatively to the frame **25**. The string engaging strips are thus supported with their upper edges in abutting engagement against the undersides of the rods or stops **30** and with their string depressing lugs **44** above and spaced from the strings **24**, as seen in Figures 3 and 4.

From the foregoing it will be readily apparent that the fingers of the left hand, which engages around the fret neck of the instrument beneath the finger board **11**, may selectively engage and depress the different finger buttons **49** to thereby displace selected ones of the string depressing strips downwardly for causing the depending lugs **44** thereof to engage selected strings **24** at different points longitudinally spaced along the finger board **11** so that different musical chords will be played when the strings **24** are strummed or picked. It will also be readily apparent that the springs **50** and **51** individual to the depressed string engaging strips will return said strips to elevated positions when the pressure on the buttons **49** thereof is released. Due to the close fitting sliding engagement between the nested string depressing strips, each of said strips will be guided in its sliding movement toward and away from the strings **24** by other of said strips to insure movement of said strips in directions perpendicular to the plane of the finger board. All but the innermost and outermost strips will be thus guided by the two strips between which said strip is disposed.

It will thus be apparent that the novel nested arrangement of the string depressing strips not only results in a chording device which is extremely compact yet capable of playing a maximum number of chords but additionally provides a device whereby the individual chord depressing strips are guided in their sliding movement by other of said strips. Further, the lugs **44** of the different string depressing strips are arranged so as to afford no obstruction to the lugs of the other strips.

Various modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A chord playing attachment for a stringed musical instrument of the character described, comprising an elongated supporting frame having an open top and an open bottom, a supporting bracket supporting said frame above and longitudinally of a portion of a finger board of a stringed musical instrument and above and spaced from the strings thereof, a plurality of string depressing elements disposed in said frame and longitudinally thereof, each of said string depressing elements consisting of a relatively wide strip of metal disposed in a vertical plane, relative to said supporting frame and longitudinally thereof, each of said strips having a plurality of longitudinally spaced portions disposed transversely of the frame, said strips having depending string depressing lugs formed in certain of the transversely extending portions thereof, said strips being disposed in close interfitting nested relationship relatively to one another, means individual to said strips connected thereto and disposed thereabove and adapted to be manually engaged for selectively displacing the strips downwardly to cause the lugs thereof to depress the portions of the strings disposed beneath said lugs, and spring means individual to said strips supported by the frame and connected to said aforementioned means for urging the strips upwardly and for normally supporting the lugs of the strips in elevated positions above and out of contact with the instrument strings, certain of said transverse strip portions constituting end portions of the strips, said means connected to the strips comprising elongated bails disposed longitudinally of the strips and having downturned end portions secured to said end portions of the strips, said bails being disposed in spaced apart substantially parallel relation to one another.

2. A chord playing device as in claim 1, said frame

including transversely disposed rods located beyond the ends of said strips, said spring means comprising strands of spring wire supported on said rods having complementary ends anchored to portions of the supporting frame and inwardly extending opposite ends connected to said bails adjacent said end portions of the strips, each of said bails being engaged by a spring located adjacent each end of the frame whereby each of said bails and the strip individual thereto is supported by a pair of said springs.

3. A chord playing device for a stringed musical instrument of the character described, comprising an elongated supporting frame having an open top and an open bottom, a supporting bracket supporting said frame above and longitudinally of a portion of a finger board of a stringed musical instrument and above and spaced from the strings thereof, a plurality of string depressing elements disposed in said frame and longitudinally thereof, each of said string depressing elements consisting of a relatively wide strip of metal disposed in a vertical plane, relative to said supporting frame and longitudinally thereof, each of said strips having a plurality of longitudinally spaced portions disposed transversely of the frame, said strips having depending string depressing lugs formed in certain of the transversely extending portions thereof, said strips being disposed in close interfitting nested relationship relatively to one another, means individual to said strips connected thereto and disposed thereabove and adapted to be manually engaged for selectively displacing the strips downwardly to cause the lugs thereof to depress the portions of the strings disposed beneath said lugs, spring means individual to said strips supported by the frame and connected to said aforementioned means for urging the strips upwardly and for normally supporting the lugs of the strips in elevated positions above and out of contact with the instrument strings, said mounting bracket comprising an elongated metal strip having an intermediate bottom portion adapted to be disposed above a part of the tuning key mounting head of the instrument and transversely thereof and having upturned end portions defining walls, said supporting frame having complementary side walls corresponding ends of which overlap said mounting bracket walls, and fastening means securing said frame side walls to said bracket walls for detachably supporting the frame on the bracket and whereby neither the frame nor bracket contacts the fingerboard or neck of the instrument.

4. A chord playing device as in claim 3, said bottom portion of the bracket being adapted to be disposed beneath the strings of the instrument and having an upturned edge extending between the bracket walls, said upturned edge being provided with upwardly opening notches through which the strings extend and forming a string divider, said bottom portion of the bracket being urged downwardly by the tension of the strings.

5. A chord playing device as in claim 4, a plurality of screws extending threadedly through said bracket bottom, and pads swivelly mounted on the lower ends of said screws and bearing on the tuning key mounting head for supporting the bracket bottom in engagement with the strings and cooperating with the strings for maintaining the bracket immovably positioned on the tuning key mounting head.

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