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TONE MELLOWER

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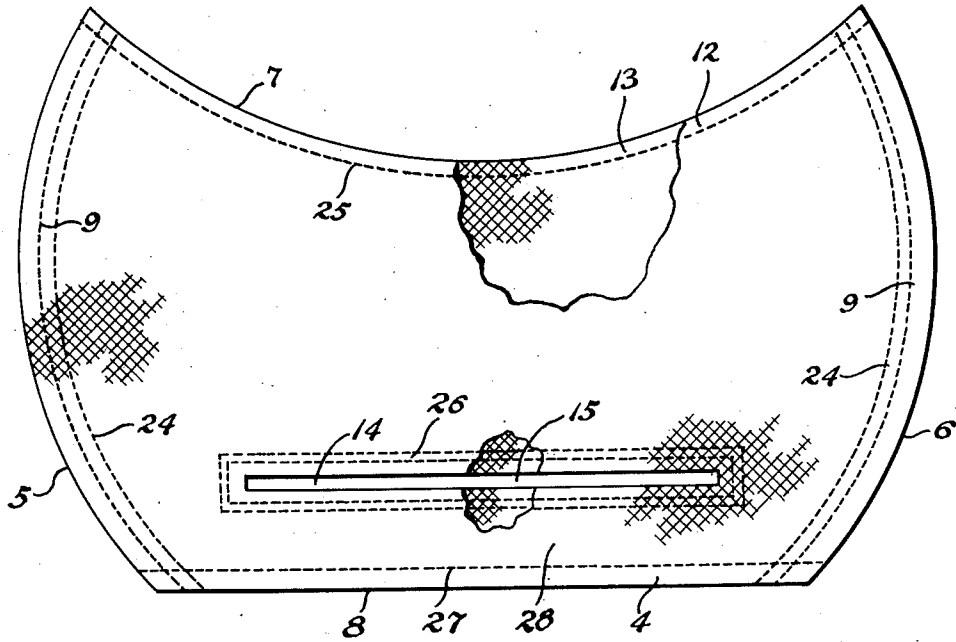


Fig. 1.

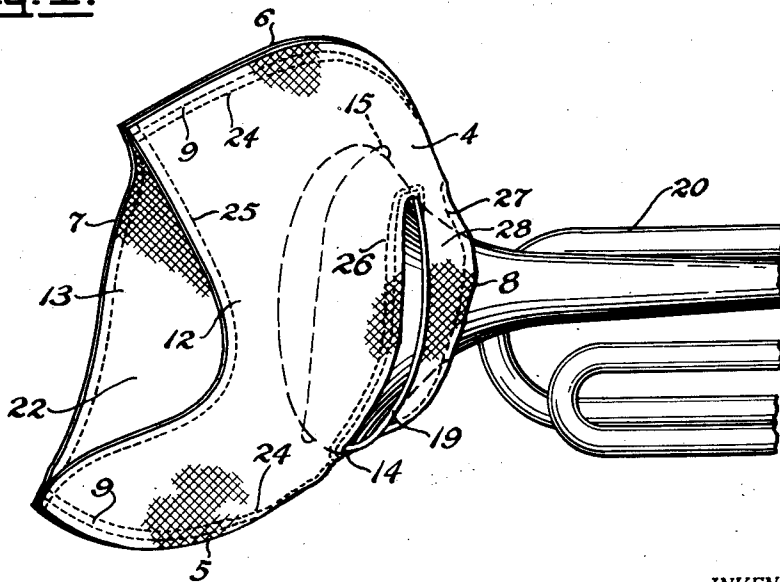


Fig. 2.

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TONE MELLOWER

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4 Claims. (Cl. 84—400)

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This invention relates to a tone mellowing device for use on horn-type musical instruments, and has for one of its objects an effective softening of the harsher tones of such instruments.

Another object is to provide a tone mellowing device so constructed as to permit unobstructed application of a mute to the instrument without interrupting the musician's performance or interfering with the tone mellowing.

Another object is to provide a tone mellowing device of simple and inexpensive construction, and which readily may be folded or collapsed to flat form when not in use.

A further object is to provide a device of the character referred to, which may be constructed wholly of fabric or textile material, or of any other material of a flexible nature having sound deadening or softening qualities.

Another object is to provide a device for the purposes stated, which cannot injure the finish of the horn bell, and which presents a pleasing appearance when applied thereto.

These and other objects and advantages are attained by the means described in the following specifications and illustrated upon the accompanying drawings in which:

Fig. 1 is a plan view of the device, partly broken away to show its construction.

Fig. 2 is a perspective view, showing the device in use on the bell of a wind instrument, part of the instrument being broken away.

At times it is desirable, during a musical performance to soften the harsher tones of wind instruments such as horns, without materially reducing the volume of the sound, as for instance when bands or orchestras perform in radio broadcasting and recording studios or the like. Mellowing devices of the past have been cumbersome, difficult of application, and generally unsatisfactory for various reasons, often interfering with or interrupting the operation of the instruments on which they were used. The tone mellowing device of the present invention is designed for instant attachment to and removal from musical instruments of the horn type. Its design also permits the use of a mute in the bell of a wind instrument and its removal therefrom without in any way interfering with the effectiveness of the tone mellowing while applied to the same instrument. In this connection it might be said that a mute differs from a tone mellowing device in that a mute deadens or reduces the volume of the sounds emanating from a wind instrument, while the tone mellowing device merely softens the harsher notes without materially reducing the volume thereof. A mute is frictionally held in the mouth of the instrument bell, while the tone mellowing device of the present invention is slipped over the flared edges or rim of said bell.

The device of the invention indicated at 4, is constructed preferably of flexible sheet material

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having sound-softening properties, such as felt, textile fabric, or other fibrous material. The device comprises a tubular body open at opposite ends 7 and 8, and closed at the edges 5 and 6, and when collapsed it assumes a substantially elongated flat shape. The preferred form as shown in Fig. 1, has the two edges 5 and 6, arcuated preferably though not necessarily on a common radius. The forward end 7 may be arcuate in form, having its radius outside the device, and the rear end 8 may be substantially straight. Two sheets of material 12 and 13, of substantially the same configuration, are superposed one upon the other and suitably joined, as by stitching or otherwise at each end 5 and 6, leaving the forward and rear ends of the resultant tubular body unrestrictedly open, as suggested by Fig. 2.

Means are provided for quick and easy application and removal of the device relative to the bell of a horn, said means preferably being integral with the material of the tubular body and providing a bell embracing or receiving device. The bell embracing or receiving device may be in the form of pockets at opposite sides of the tubular body, formed for example by making two slots 14 and 15, one in each sheet or wall. The slots preferably are in registry, and are adapted to engage the rim of the horn bell 19 of the wind instrument 20, as the open rear end 8 is passed over the bell, as illustrated in Fig. 2. The slot may be formed in each wall before assembly, or the slots may be formed simultaneously after assembly of the tone mellowing device. As will be noted, the length of the slots 14 and 15, is less than the diameter of the horn bell, which construction limits the extent of engagement over the rim of the horn bell, thereby establishing a firm grip thereon. At the same time, because of said limited extent of engagement, the forward end 7 is forced open and held distended as shown at 22 in Fig. 2. The opening thus formed permits free and easy access to the interior portion of the horn bell for the insertion and removal of a mute without interfering with the tone mellowing or interrupting the musical performance.

If desired, each of the walls 12 and 13 may be made up of two or more layers of flexible sheet material, one or more of which possess sound-softening properties. When thus fabricated of plural layers, the constituents of each wall are secured together by suitable means, such as stitching 24, 25, 26 and 27. The walls 12 and 13 thus fabricated may then be laid one upon the other and fastened together at the ends 5 and 6 as hereinbefore described. When each wall is formed from a single thickness of material, the aforesaid stitching may be dispensed with, of course.

The bands 28 formed by locating the slots 14—15 in spaced substantial parallelism with the rear end of the tubular body, are flexible and

deformable, and in the preferred form of the device said bands are lined with the same soft lining material that covers the inner faces of the body portion of the device. The bands accordingly cannot injure the finish of the horn bell while performing the service of effectively retaining the tone mellow in position thereon.

The curvature or arcuacy of the device at the locations 5 and 6 performs upon distention of the body, to hold the forward end open as at 22 while the tone mellow is in use. This reaction results from strains occurring in the tubular body incident to distortion effected at the rear end of the body by the bell of the horn. If the body were made in the form of a true cylinder, the forward end at 22 obviously would tend to close, and thereby interfere with insertion of a mute into the mouth of the bell. Under the present arrangement, however, the forward end is effectively held open, as indicated at 22 upon Fig. 2.

It will be appreciated by those skilled in the art, that harsh notes emanating from a wind instrument and passing through and around the device herein disclosed will be appreciably softened without a material reduction in volume and loss of fidelity.

The device may be quickly and easily applied and removed, as the occasion warrants, by the use of one hand of the operator without interfering with the musical performance. At times, the musician may wish to apply the device to the instrument bell in a reversed condition, that is, with the major portion of the body covering the bell of the instrument, so that only the strap portions 28 project forwardly of the instrument. Such use of the tone mellow will modify the tone softening effect, as will be appreciated. When not in use, the tone mellow of the present invention occupies little more space than a handkerchief and is easily placed in the pocket or folded and stored in the case of the instrument upon which it is used.

While the drawings show the preferred configuration of the device, it is to be understood that various modifications in design and construction may be made within the scope of the appended claims without departing from the spirit of the invention. Accordingly, the material of which the device is made can be varied widely, and it will readily be obvious that the tubular body may be constructed from a single sheet of material if desired. The use of a soft and flexible material such as felt or the like is found desirable, however, for the reason that it will readily adhere to the musician's trousers leg at the knee when placed thereon for instant accessibility from time to time. A single slot such as 14 may suffice to hold the tone mellow in place upon the horn bell, and of course, the number of slots may be increased if desired. The slots, in effect, are pockets or recesses of the body, and it is accordingly contemplated that the material of the body may be depressed or permanently distorted where the slots are shown, to provide channels or grooves in which the rim of the bell may rest, thereby eliminating the need for piercing the material of the walls or sheets 12 and 13. The slots or other means of maintaining the tone mellow in place upon the instrument bell, may be located at various distances from the edges 8, and if desired a multiplicity of such slots may be provided in spaced relationship, in each side member of the body.

What is claimed is:

1. A collapsible tone mellowing attachment for application to the bell rim of a horn, comprising a tubular body formed from two opposed initially flat sheets of flexible sound softening material, said sheets each having opposed ends arcuate of configuration, and means joining together the corresponding arcuate ends of the sheets along arcuate lines of joiner, the tubular body thereby formed having a forward continuous edge and a rear continuous edge both capable of easy deformation, and the material of the sheets each being slotted for a limited distance between the joining means for the sheet ends, with the slots extending transversely of the axis of the tubular body.

2. A collapsible tone mellowing attachment for application to the bell rim of a horn, comprising a tubular body formed from two opposed initially flat sheets of flexible sound softening material, said sheets each having opposed ends arcuate of configuration, and means joining together the corresponding arcuate ends of the sheets along arcuate lines of joiner, the tubular body thereby formed having a forward continuous edge and a rear continuous edge both capable of easy deformation, and deformable bell embracing means formed integrally with the sheets of the body, for holding the attachment in place upon the bell of the horn.

3. A collapsible tone mellowing attachment for application to the bell rim of a horn, comprising a tubular body formed from two opposed initially flat sheets of flexible sound softening material, said sheets each having opposed ends arcuate of configuration, and means joining together the corresponding arcuate ends of the sheets along arcuate lines of joiner, the tubular body thereby formed having a forward continuous edge and a rear continuous edge both capable of easy deformation, and deformable bell embracing means formed integrally with the sheets of the body, for holding the attachment in place upon the bell of the horn, said bell embracing means being in the form of elongated registering slot edges in spaced substantial parallelism with the rear edge of the tubular body.

4. A collapsible tone mellowing attachment for application to the bell rim of a horn, comprising a tubular body formed from two opposed initially flat sheets of flexible sound softening material, said sheets each having opposed ends arcuate of configuration, and means joining together the corresponding arcuate ends of the sheets along arcuate lines of joiner, the tubular body thereby formed having a forward continuous edge and a rear continuous edge both capable of easy deformation, and deformable bell embracing means formed integrally with the sheets of the body, for holding the attachment in place upon the bell of the horn, said bell embracing means being in the form of elongated registering slot edges in spaced substantial parallelism with the rear edge of the tubular body, and means along the slot edges for reinforcing same against permanent distortion.

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The following references are of record in the file of this patent:

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