April 7, 1936. T. H. PEDLER 2,036,356

TUNING JOINT FOR MUSICAL INSTRUMENTS

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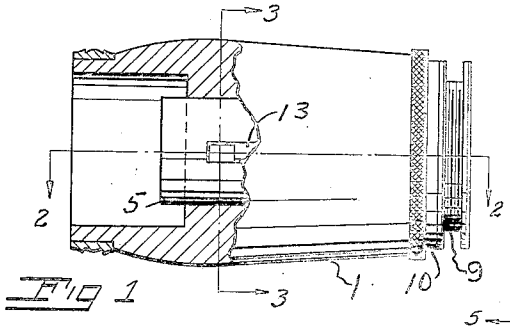

Fig 1

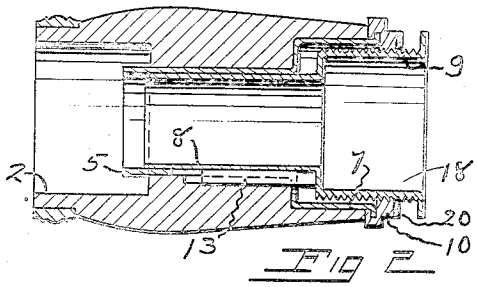

Fig 2

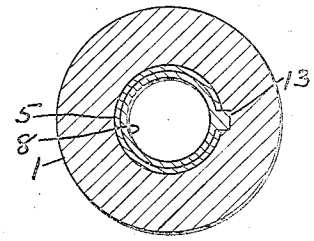

Fig 3

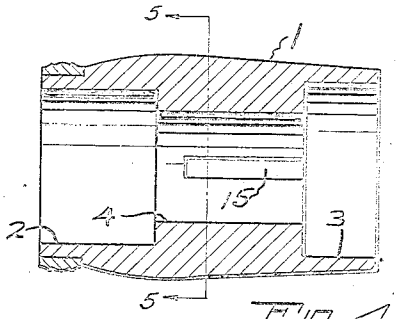

Fig 4

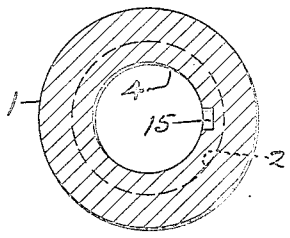

Fig 5

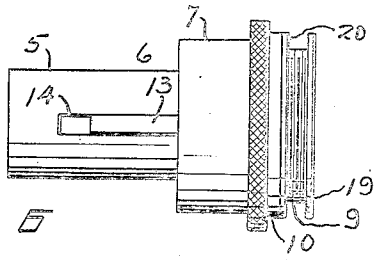

Fig 6

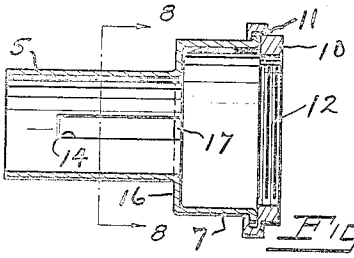

Fig 7

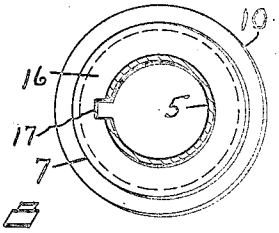

Fig 8

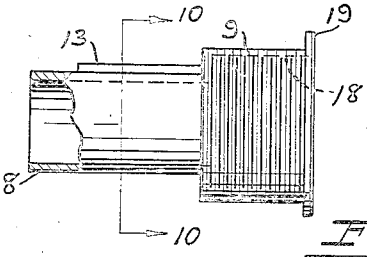

Fig 9

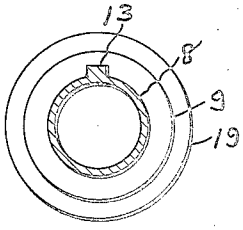

Fig 10

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TUNING JOINT FOR MUSICAL INSTRUMENTS

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3 Claims. (Cl. 84—382)

This invention relates to wind musical instruments, and particularly to reed musical instruments.

An object of the invention is to provide an improved tuning joint for clarinets, or the like, in which corrosion of certain working parts, resulting from moisture accumulation, is obviated.

Another object is to provide an improved tuning joint for reed musical instruments in which screws, and other now commonly used small metal parts, are eliminated to obviate corrosion thereof.

A third object is to provide means to prevent frictional locking or binding between the inner and outer sleeves of a tuning joint for reed musical instruments.

Yet another object is to provide an improved tuning joint for reed musical instruments wherein a single key carried by the inner of two sleeves maintains both sleeves of the device against rotation.

Other objects of the invention are mentioned and described herein.

The invention is illustrated in the accompanying drawing, wherein

Figure 1 is a side elevation of the assembled tuning joint partially in section;

Figure 2 illustrates a section taken on line 2—2 of Figure 1;

Figure 3 illustrates a section taken on line 3—3 of Figure 1;

Figure 4 is a longitudinal section taken through the body of the tuning joint;

Figure 5 illustrates a section taken on line 5—5 of Figure 4;

Figure 6 illustrates a longitudinal or side view of the assembled inner and outer sleeves and their associated parts;

Figure 7 illustrates a longitudinal sectional view of the outer sleeve of the tuning joint with the adjusting nut mounted thereon;

Figure 8 illustrates a section taken on line 8—8 of Figure 7;

Figure 9 illustrates an exterior longitudinal view of the tuning joint inner sleeve partially broken away; and

Figure 10 illustrates a section taken on line 10—10 of Figure 9.

Similar numerals of reference indicate like parts throughout the several views on the drawing.

Referring to the details of the drawing the numeral 1 indicates a tuning joint body, which may be either metal or non-metallic, and which is provided with the two end bores 2 and 3 and a reduced medial bore 4, the bore 2 being adapted to receive therein a clarinet body joint, and bore 3 to receive the enlarged portion of the outer sleeve of the tuning joint unit, as herein described.

The bore 4 of the body member 1 has the reduced tubular portion 5 of the tuning joint outer sleeve 6 detachably arranged therein, the outer enlarged end 7 of said sleeve being disposed within the body bore 3, as stated. The inner sleeve of the tuning joint may comprise the tubular portion 8 which slidably telescopes into the portion 5 of the outer sleeve, and which is provided with the enlarged end section 9 having external screw threads thereon.

The enlarged section 7 of the outer sleeve has a non-advancing ring-like adjusting nut rotatably mounted thereon by virtue of an annular flange and groove connection at 11 (Fig. 7), said adjusting nut being provided with the interior screw threads 12 which mesh with the exterior threads on section 9 of the inner sleeve. Both the inner and outer sleeves of the tuning joint are held against rotation within the body member 1 by a spline key 13 rigid with the section 8 of the inner sleeve, said key extending longitudinally of said section 8 and projecting through a longitudinal slot 14 formed in section 5 of the outer sleeve, said key projecting slidably into the longitudinal slot 15 formed in bore 4 of the body member 1. To admit the disposition of the spline key 13 into body slot 15 the end wall 16 of section 7 of the outer sleeve 6 is radially apertured at 17.

It will be evident from the foregoing that rotation of the adjusting nut 10, which has a complementary groove and annular flange connection with the outer sleeve section 7 and which is in screw thread engagement with the section 9 of the inner sleeve, will effect longitudinal reciprocal movement of the latter within the outer sleeve 6, and that the slidable key 13 prevents rotation of both the inner and outer sleeves of the tuning joint unit when the inner sleeve is actuated.

The bore 18 of the inner sleeve section 9 is adapted to function as a socket for the reed bearing mouthpiece, as is well known in the art, and the outer end of said sleeve section 9 may be provided with an annular stop flange 19. The numeral 20 indicates a thin washer loosely encompassing the section 9 of the inner sleeve, said washer functioning to prevent frictional coherence, or binding, between the flange 19 and the adjusting nut 10 when the inner sleeve is actuated inward to the limit of its travel. The use of the

washer 20 also prevents frictional coherence between the end walls of the sleeve sections 9 and 7, by spacing them apart slightly, when the inner sleeve is positioned at the limit of its inward movement.

It will be evident too from the foregoing that the socket section 9 of the inner sleeve is wholly free from screw holes, or other apertures of any sort which might admit moisture therethrough from the mouthpiece mounted therein, to small screws, now in common use in the assembly of devices of this character and subject to corrosion from moisture; and that the use of the key 13, in the manner shown and described, not only wholly eliminates small parts and screws subject to corrosion but also enhances both the efficiency and durability of the tuning joint unit.

I claim:—

1. In a tuning joint for musical instruments the combination of inner and outer telescoping sleeves, the inner sleeve being reciprocable in relation to the outer sleeve, said outer sleeve carrying a rotary adjusting nut for actuating said inner sleeve, and said inner sleeve being provided with an end flange, and a washer loosely mounted on said inner sleeve between said end flange and said adjusting nut.

2. A tuning joint for reed musical instruments comprising a tubular body, a stationary outer sleeve mounted within said body and provided with a socket at its outer end, an inner sleeve slidably telescoping into said stationary sleeve and provided with a mouthpiece socket arranged within the outer sleeve socket, a non-advancing ring-like rotary adjusting nut mounted on said stationary sleeve socket exterior, a complementary spiral connection between said adjusting nut and said inner sleeve mouthpiece socket, and means to prevent frictional coherence between said inner and outer sleeves when the former is positioned at the limit of its travel.

3. A tuning joint for reed musical instruments comprising a tubular body provided with a longitudinal key slot in the bore thereof, a stationary outer sleeve member mounted within said body member and provided with a longitudinal key slot which registers with said body key slot, an inner sleeve member slidably telescoping into said stationary outer sleeve and provided with a key which projects through the slot in said outer sleeve into the body member key slot, a non-advancing ring-like rotary adjusting nut mounted on said stationary outer sleeve, and a complementary spiral connection between said adjusting nut and the inner sleeve member.

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