April 13, 1948. P. M. BREDICE 2,439,713

AUTOMATIC WARMER FOR MUSICAL INSTRUMENTS

Filed Nov. 19, 1945

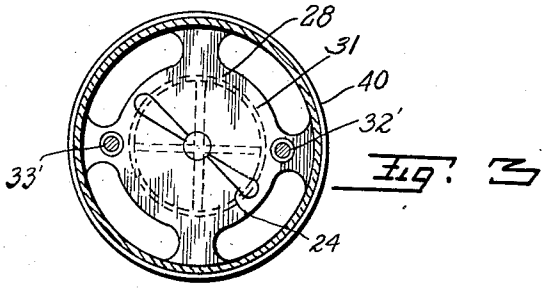


Fig. 3

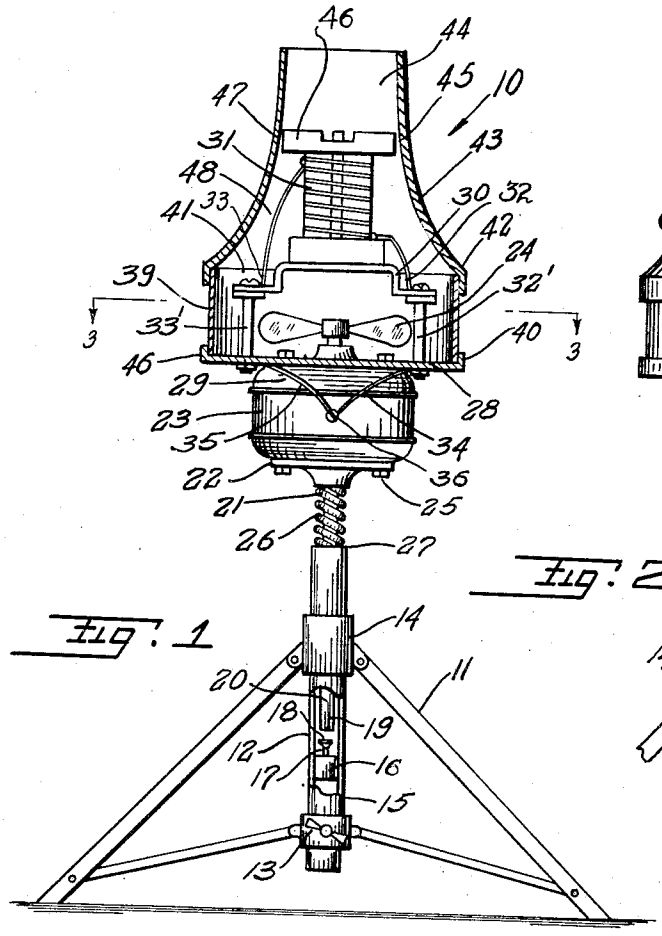


Fig. 1

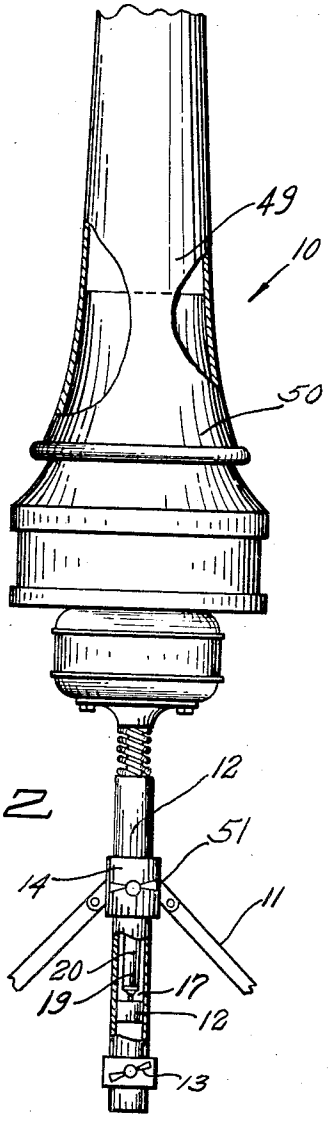


Fig. 2

Inventor

Pasquale Michael Bredice

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

Patented Apr. 13, 1948 2,439,713

UNITED STATES PATENT OFFICE

2,439,713

AUTOMATIC WARMER FOR MUSICAL INSTRUMENTS

Pasquale Michael Bredice, Middletown, R. I., assignor of fifty per cent to Gordon Lawrence Hubert, Middletown, R. I.

Application November 19, 1945, Serial No. 629,562

7 Claims. (Cl. 219—39)

1

My invention relates to musical instruments, primarily wind instruments, and has for an object to provide means whereby such instruments may be quickly warmed.

Another object of this invention is to provide a device adapted to receive the bell of a trumpet or the like and upon placing the instrument therein the device will automatically blow a stream of heated air through the instrument, thereby quickly warming the same.

A further object of the invention is to provide tripod supported blower and heater upon which an instrument may be seated, the weight of which will automatically close an electric circuit for operating a fan and operate a heating unit over which a draught of air is blown by the fan.

Other features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings in which:

Figure 1 is a sectional elevational view of my invention,

Figure 2 is a similar view shown in operative position, and

Figure 3 is a transverse sectional view taken on line 3—3 of Figure 1.

In the above drawings as well as in the specification to follow, the same characters of reference indicate the same parts throughout.

While one embodiment of my invention is illustrated in the above referred to drawings, it is to be understood that they are merely for the purpose of illustration and that various changes in construction may be resorted to in the course of manufacture in order that the invention may be utilized to the best advantage according to circumstances which may arise, without in any way departing from the spirit and intention of my device, which is to be limited only in accordance with the appended claims. And while I have stated the primary field of utility of my invention it remains obvious that it may be employed in any other capacity wherein it may be found applicable.

In the drawings the reference numeral 10 indicates my invention which consists of a tripod 11 carrying a tubular upright guide 12 by means of the collars 13 and 14, which are adjustable relative to the tube. Mounted within the lower part 15 of the tube is a micro-switch 16 having a switch control plunger 17 with a head 18, upon which the terminal 19 of a rod 20 is adapted to seat and move in the box 12, as will later be explained.

To the upper end 21 of the tube 20 is fixed

2

a seat 22, to which a motor 23 of an electric fan 24 is secured by bolts 25. Coiled around said end 21, is a spring 26 which seats upon the upper terminal 27 of tube 20, and upon the upper end of which the seat 22 is supported.

Mounted upon a bracket 28, which is fixed to the upper end 29 of said motor 23, is a support 30 for an electric heating element 31, the ends 32 and 33 of which connect with conductor wires 34 and 35, are secured to the conductor post 36. A casing 39 is held by the marginal flange 40 of the outer periphery of member 28. Upon the upper edge 41 of casing 39 is seated the lower end 42 of a bell 43, which tapers up to a tubular end 44 forming a reduced neck 45, within which seats the disk terminal 46 of the heating element, the diameter of which is such as to leave only a reduced passage 47 therebetween and the said neck 45, whereby air being heated in the chamber 48 will be retarded to become properly heated before passing out the bell mouth 49 of an instrument 50, which mouth is seated frictionally upon said tapering end 44 of the bell 43.

When the said instrument 50 is seated upon the bell 43, its weight is sufficient to overcome the spring 26, and drive the rod 20 down upon head 18 of the switch 12, thereby closing an electric circuit and starting the fan 24 moving and the unit 31 for heating, and as long as the said instrument 50 remains on the member 43, the heating and blowing operation will continue. However, when the instrument is removed the spring 26 again raises the rod end 21, fixed to said plate 22, and releasing the spring actuated rod 17 and opening the switch to cut off further current to the motor 23 and heater 31. The collar 14 is provided with a set screw 51 by means of which the height of the tripod may be adjusted for proper accommodation of various instruments.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Changes in shape, size and rearrangement of details and parts such as come within the purview of the invention claimed may be resorted to, in actual practice, if desired.

Having now described my invention that which I claim as new and desire to procure by Letters Patent is:

1. The described device comprising a heater element and a bell mounted thereover to receive the bell of a musical instrument, a blower be-

neath the heater, a motor for driving the blower, a switch operating connection between the motor and heater actuated by the weight of the instrument being placed on the first bell, a rod supporting the motor and a tube in which the rod slidably seats forming said connection, a spring normally holding the rod from the switch, and said switch mounted within said tube.

2. The described device comprising a heater element and a bell mounted thereover to receive the bell of a musical instrument, a blower beneath the heater, a motor for driving the blower, an automatic switch operating connection between the motor and heater adapted to be actuated by the weight of the instrument being placed on the first bell, a rod supporting the motor and a tube in which the rod slidably seats forming said connection, and a spring normally holding the rod from the switch.

3. The described device comprising a heater element and a bell mounted thereover to receive the bell of a musical instrument, a blower beneath the heater, a motor for driving the blower, an automatic switch operating connection between the motor and heater actuated by the weight of the instrument being placed on the first bell, and a rod supporting the motor, a foldable stand having a tube therein in which the rod slidably seats forming said connection.

4. A musical instrument warmer comprising a foldable stand having a tube therein, a carrier having a rod projecting therefrom, said rod slidably received in said tube, resilient means for urging said carrier from said tube, a housing on said carrier having outwardly curved sides thereof for receiving the bell of a musical instrument thereon, heating means in said housing, flow producing means in said carrier, means in said tube for selectively controlling the actuation of said flow producing and heating means.

5. A musical instrument warmer comprising a foldable stand having a tube therein, a carrier having a rod projecting therefrom, said rod slidably received in said tube, resilient means for urging said carrier from said tube, a housing on said carrier having outwardly curved sides thereof for receiving the bell of a musical instrument thereon, heating means in said housing, flow producing means in said carrier, means in said tube for selectively controlling the actuation of said flow producing and heating means, said resilient means including a spring about said rod and abutting said carrier and tube.

6. A musical instrument warmer comprising a foldable stand having a tube therein, a carrier having a rod projecting therefrom, said rod slidably received in said tube, resilient means for urging said carrier from said tube, a housing on said carrier having outwardly curved sides thereof for receiving the bell of a musical instrument thereon, heating means in said housing, flow producing means in said carrier, means in said tube for selectively controlling the actuation of said flow producing and heating means, said control means comprising a circuit breaker actuated by movement of said rod, said movement induced by the combined weight of said carrier and instrument thereon.

7. The invention recited in claim 6 and said resilient means including a spring operatively interposed between said carrier and said tube.

PASQUALE MICHAEL BREDICE.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,064,358	Mettler	June 10, 1913
1,756,033	Nordan	Apr. 29, 1930
1,887,233	Condos	Nov. 8, 1932
1,967,713	Kelley	July 24, 1934
2,020,364	Lehmann	Nov. 12, 1935

FOREIGN PATENTS

Number	Country	Date
159,656	Switzerland	Apr. 1, 1933