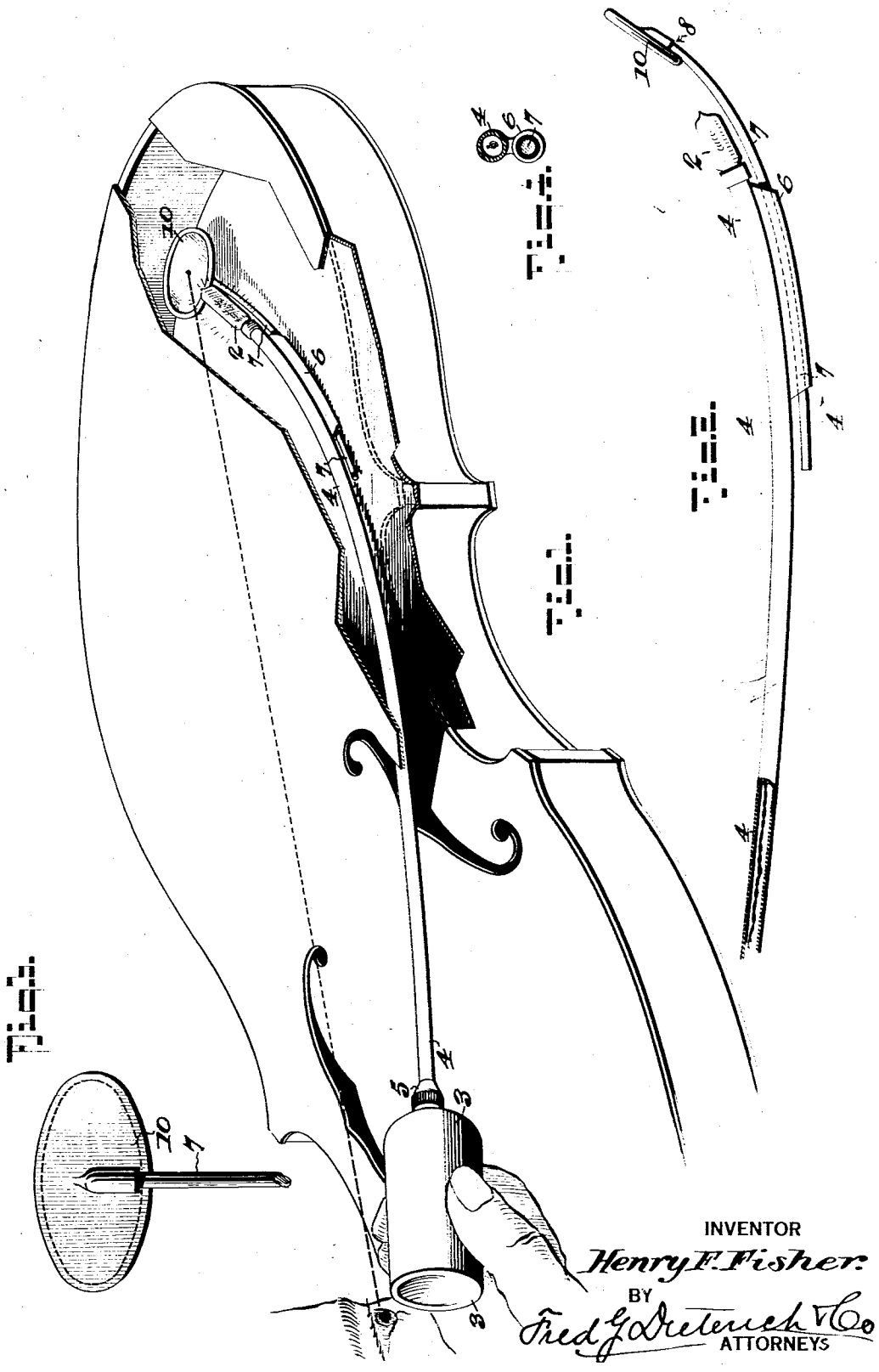
H. F. FISHER.

VIOLIN INSPECTING DEVICE.

APPLICATION FILED JAN. 23, 1918.

1,306,953.

Patented June 17, 1919.



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HENRY F. FISHER, OF VANCOUVER, BRITISH COLUMBIA, CANADA.

VIOLIN-INSPECTING DEVICE.

1,306,953. Specification of Letters Patent. Patented June 17, 1919.

Application filed January 23, 1918. Serial No. 213,363.

To all whom it may concern:

Be it known that I, HENRY F. FISHER, a citizen of the United States, residing at Vancouver, in the Province of British Columbia, Canada, have invented certain new and useful Improvements in Violin-Inspecting Devices, of which the following is a specification.

This invention relates to a device enabling the interior walls of a violin or the like instrument to be inspected.

The limited size of the sound holes of such musical instruments and the existence of such obstructions as "bridges" and the like within the sound box, prevent anything but an extremely limited examination of the finish and condition of the interior walls to be made, yet the condition of these walls is very material in estimating the quality and value of the instrument.

The device, which is the subject of this application, is designed to illuminate the interior of the sound box of an instrument of this class and permit examination to be made of the interior walls by a reflecting mirror carried adjacent the light.

The invention is particularly described in the following specification, reference being made to the drawing by which it is accompanied, in which:

Figure 1 is a general view of the device showing its application to the examination of the interior wall of a violin through the "*f*" hole.

Fig. 2 is a side elevation, partly in section of the mirror and light holding end of my improved device.

Fig. 3 is a face view of the end mirror.

Fig. 4 is a cross section on the line 4—4 on Fig. 2.

The device comprises the combination with a battery cell, preferably inclosed within a suitable casing 3, which is provided with a cut-out switch, of a tubular conduit 4 removably connected at 5 to the casing 3, that the wires from the cell may be conducted along the conduit to the socket of a small incandescent lamp bulb 2. This bulb may require to be of special form where it is to be passed through the "*f*" hole of a violin, as the size of such apertures is limited in width. The bulb may be extremely flattened with a reflecting surface at the back of the filament or may be axially elongated, as shown in Fig. 1, so as to get the required length of filament within a bulb of small diameter.

The conduit 4 is bent to a curve to facilitate passage of it to the interior of a violin.

Slidably mounted in a tubular socket 6 at the end of the conduit 4 adjacent the lamp socket and parallel to it is a stem 7 which is similarly curved to the conduit.

The end of this stem 7 is bent as at 8 toward the concave side of the arc of curvature to an angle that when the duct and stem are inserted within the instrument a small mirror 10 socketed on the tapered end of the stem will reflect that portion of the wall of the instrument toward which it is directed, and will at the same time afford a view of the reflection from the sound aperture. The curvature of the socket and stem prevent the rotation of one in relation to the other.

The device as described may be inserted in the sound aperture of an instrument and being directed toward that part of the wall, inspection of which is required, that portion of the wall, illuminated by the lamp 2, will be reflected in the mirror 10 and viewed either from the aperture through which the device is inserted or through an adjoining aperture, if such there be, that will afford a view of the mirror.

Defects in the finish of the inner surface of the instrument, or patches and repairs to the same that may affect its value, may thus be inspected and the value of an instrument more accurately determined than under the general inspection at present obtainable.

It must be distinctly understood that the invention is not limited to the particular construction herein set forth as the same may be varied to suit the requirements of any particular instrument or the convenience of manufacture. The essential features of the invention reside in the use of the lamp carrying stem curved that it may be passed through the sound aperture to any desired part of the interior of the sound box, with means for conducting a current of electricity to the lamp, and a reflecting surface in proximity to the lamp that may be directed to reflect any desired portion of the interior wall and afford a view of the reflection from the sound aperture.

Having now particularly described my invention, I hereby declare that what I claim

as new and desire to be protected in by Letters Patent, is:

Means for viewing the interior of a shallow inclosed space through a small aperture in one of the larger sides, said means comprising a curved tubular member having an incandescent lamp removably connected to one end, wires leading through said tubular member to said lamp, and a source of energy connected to said wires, said tubular member having also a correspondingly curved tubular socket at the end adjacent the lamp, a stem curved to correspond with the tube and endwise slidable in the socket, the outer end of said stem being turned to the inner side of the curve at a slight angle and tapered, a small mirror having a socket to receive the tapered end of said stem.

In testimony whereof I affix my signature.

HENRY F. FISHER.