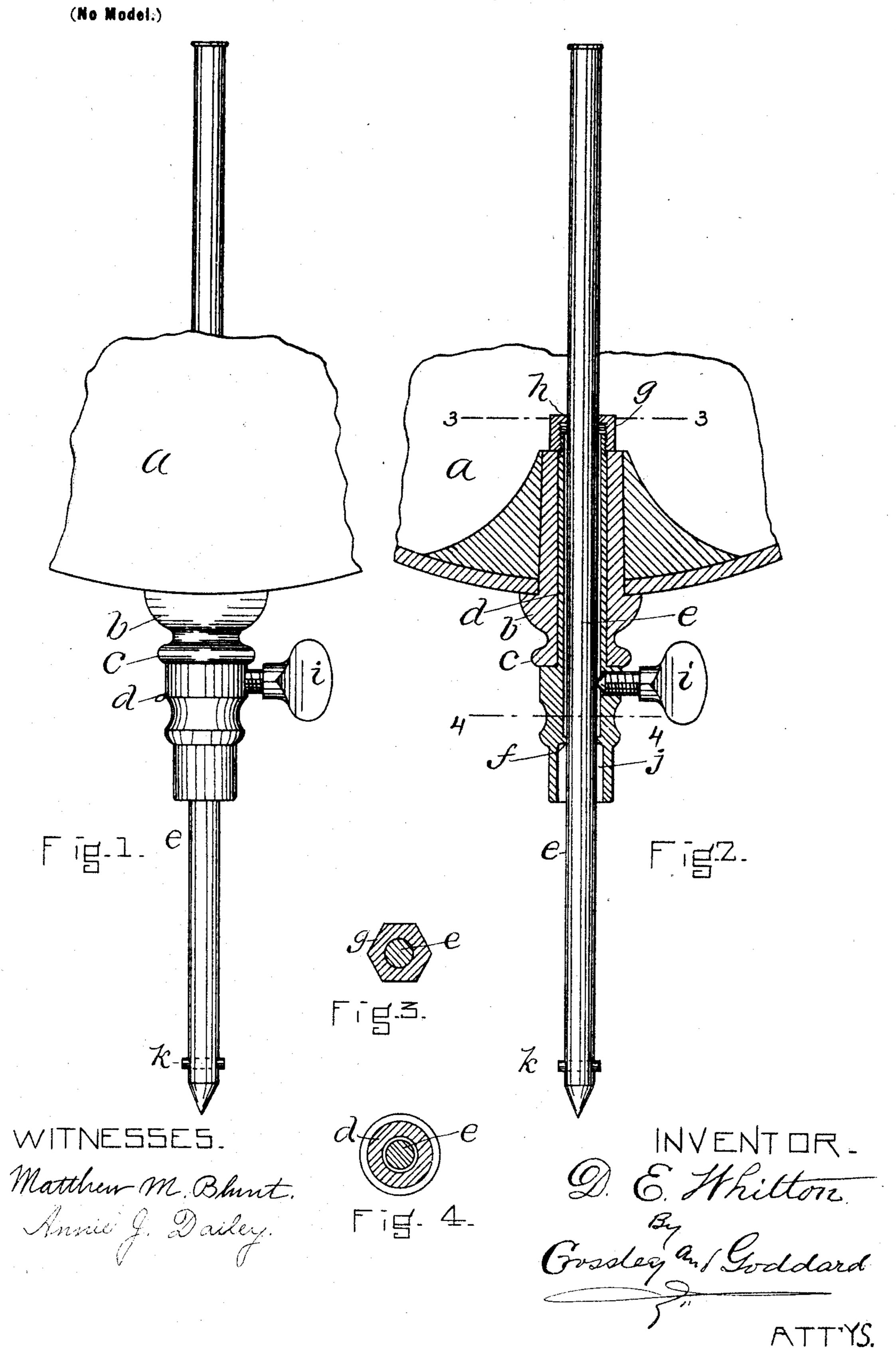
## D. E. WHITTON.

## ADJUSTABLE EXTENSION ROD FOR VIOLONCELLOS OR OTHER MUSICAL INSTRUMENTS.

(Application filed July 5, 1898.)



## United States Patent Office.

DAVID E. WHITTON, OF SOMERVILLE, MASSACHUSETTS.

ADJUSTABLE EXTENSION-ROD FOR VIOLONCELLOS OR OTHER MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 620,393, dated February 28, 1899.

Application filed July 5, 1898. Serial No. 685,103. (No model.)

To all whom it may concern:

Be it known that I, DAVID E. WHITTON, of East Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Adjustable Extension-Rods for Violoncellos or other Musical Instruments, of which the following is a description sufficiently, full, clear, and exact to enable those skilled in the art to which it appertains or with which it is most nearly connected to make and use the same.

This invention has relation to extension or adjustable rods or supports in the tail-pegs of violoncellos, whereby the latter are supported from the floor or platform while the

instrument is being played upon.

It is the main object of the invention to provide such improvements in adjustable cello rod-supports as will hold the rods securely in place against lateral play in their bearings, whereby all rattle or other noise or action that would interfere with the tone of the instrument will be avoided.

Heretofore in the constructions of adjust-25 able extension-rods, so far as I am aware, the immediate bearing for the rod has been formed directly in the tail-peg and button, and it has been such that when the rod was fixed in place by a set-screw there was lia-30 bility of the rod having a rattling play in its bearings above or below the set-screw or at both places, so as to seriously interfere with the sound of the instrument in playing thereon. By my improvements I completely avoid 35 all rattling or liability to rattle of the supporting-rod and at the same time make the immediate bearing for the rod a part separate from the tail-peg and otherwise improve the means connected with the adjustable exten-40 sion-rod, all as will hereinafter more fully appear.

Reference is to be had to the annexed drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a front elevation of my improved extension-rod for violoncellos, showing a portion of the latter. Fig. 2 is a longitudinal vertical central sectional view of what is shown in Fig. 1, the

rod being represented as in elevation. Fig. 3 is a cross-sectional view taken on the line 3 3 of Fig. 2. Fig. 4 is a cross-sectional view taken on the line 4 4 of Fig. 2.

In the drawings, a designates what may be regarded as the lower end of a violoncello or

similar musical instrument.

b designates what is commonly known as the "tail-peg" on the bottom of the instru- 60 ment. The said tail-peg terminates in what is commonly called the "tail-peg button" c. The tail-peg and its button are provided with a longitudinal central bore, as is clearly represented in Figs. 2 and 4, in which I set a lon- 65 gitudinally-bored sleeve d of a length sufficient to extend above the tail-peg and below the button thereon. The bore in the said sleeve is larger in diameter than the diameter of the extension-rod e, which is passed through 70 the sleeve. The latter is provided near its lower end, or it may be at its lower end, with an annular bearing f, having a bore sufficiently large to receive the rod therethrough, so that it may slip up and down in the sleeve. 75

The sleeve d is externally screw-threaded on its upper end to receive a cap-nut g, the latter being internally screw-threaded, so that it may turn on the upper end of the sleeve, and through the top of the cap-nut 80 there is formed a hole coinciding in extent substantially with the diameter of the hole in the annular bearing f, formed in the lower portion of the sleeve, so that the rod may be pushed upward through the tail-peg and fixed 85 in position therein and the cap-nut screwed upon the top of the sleeve and through the medium of the bearing formed by the cap-nut, as at h, and a bearing f in the sleeve constitute a bearing for the extension-rod e. Near 90 its lower end the rod e may be supported in the bearing-sleeve without touching the latter at any other points than at f and h.

i designates a set-screw tapped into the bearing-sleeve at a suitable point, so that its 95 inner end may be brought to press or bear against the rod and hold the latter rigidly in position. Under this construction it will be seen that the rod may be adjusted up and down, so as to vary the height of the violoncello or other musical instrument to suit the convenience of the player thereon, and by

means of the set-screw i the rod may be fixed in position without any liability of rattling or

play of the rod in its bearings.

The formation of the bore in the bearing larger in diameter than the diameter of the peg and with a plurality of immediate bearings, such as the annular ledges h and f, for the peg constitutes an important feature of the invention, inasmuch as it is by this means that I secure a support for the peg against rattling or other objections to the sound of the instrument. Again, another important feature of my invention is the formation of the bearing for the adjustable rod independent of the tail-peg or so far independent as that it may be made separate therefrom and fixed or secured therein.

Of course the immediate bearings for the rod may be increased in number and their position in the bearing-piece f may be varied from that shown in the drawings without departing from the nature or spirit of my invention.

I prefer to enlarge the bore of the bearing at its lower end, as at j, so that the lower end of the rod, which is provided with a cross-pin k, may be passed up into said enlarged bore j to prevent the lower end of the tail-peg from catching upon anything in the transportation or movement about of the instrument and so, also, as that the cross-pin k may prevent the rod from slipping up too far in its bearings.

Heretofore, as has been intimated, the adjustable rod has had a continuous bearing in its support, so that the adjusting-screw was unable to hold it against rattling or play to such an extent as not to interfere with the sound of the instrument. By my improvements this objection is avoided, and any change in the form and arrangement of parts that will not affect the functions of my improvements I regard as coming within the scope of my invention and as being alterna-

tive constructions thereof and not a material 45 departure from the nature or spirit of the invention.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. An adjustable extension-rod for a violoncello embodying in its construction the 55 combination, with the centrally-bored tailpeg, of a centrally-bored rod-bearing, the caput thereon, the rod, and a set-screw for securing the rod in position in its bearings.

2. An adjustable extension-rod for a vio- 60 loncello embodying in its construction the combination, with the centrally-bored tail-peg, of a centrally-bored rod-bearing secured therein, the said bore in the bearing being larger in diameter than the rod, excepting at 65 intervals, which provide the immediate lateral support for the rod, and a set-screw for securing the rod in position in the bore of the bearing.

3. An adjustable extension-rod for a vio- 70 loncello embodying in its construction the combination, with the adjustable rod and the centrally-bored tail-peg, of a centrally-bored rod-bearing, provided internally with an annular bearing for the rod, a cap-nut adapted 75 to be screwed upon the top of the bearing provided also with an annular direct bearing for the rod, and a set-screw to hold the rod in place.

In testimony whereof I have signed my 80 name to this specification, in the presence of two subscribing witnesses, this 31st day of

May, A. D. 1898.

DAVID E. WHITTON.

Witnesses:
ARTHUR W. CROSSLEY,
ANNIE J. DAILEY.