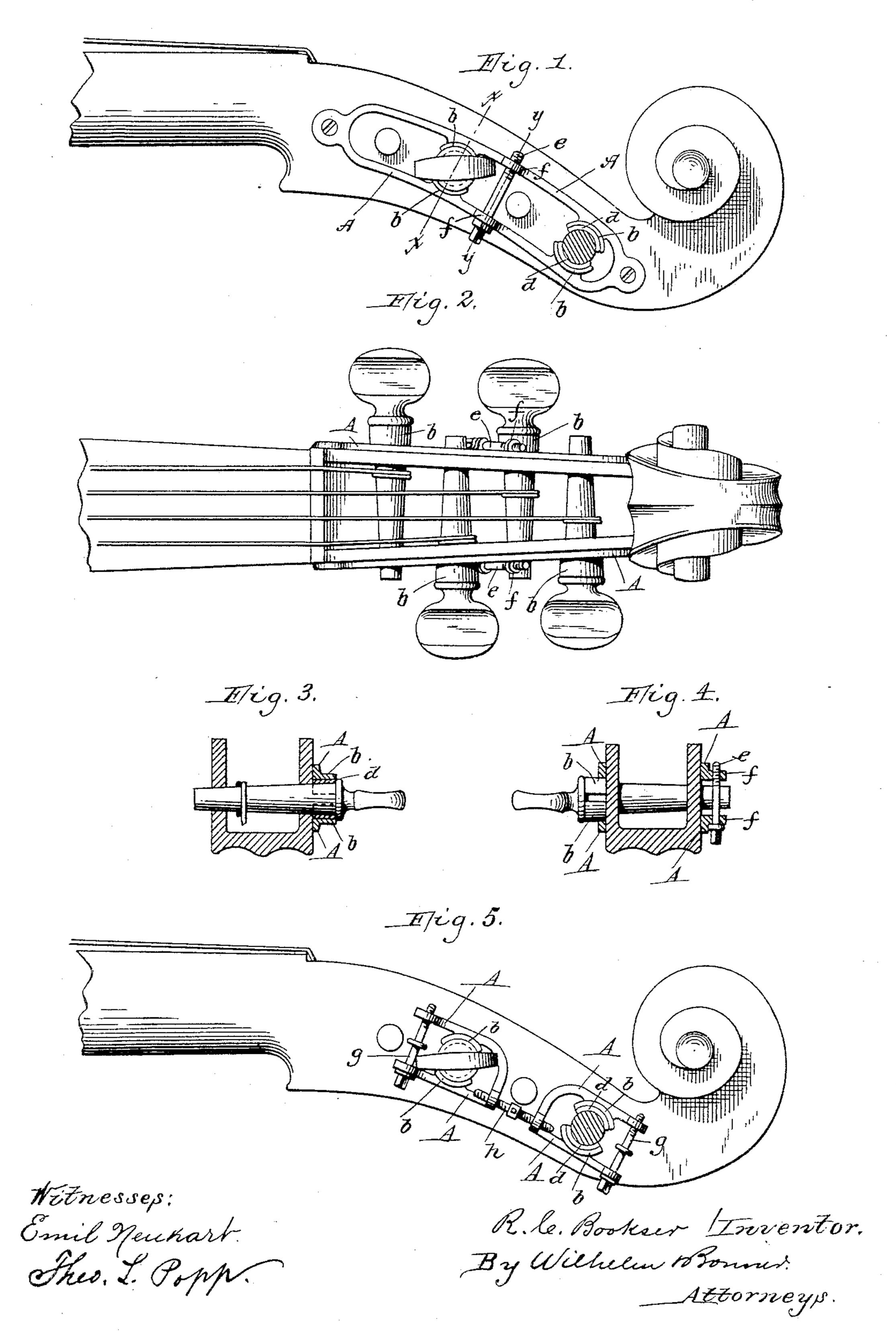
## R. C. BOOKSER. RETAINING DEVICE FOR TUNING PEGS.

No. 448,872.

Patented Mar. 24, 1891.



## United States Patent Office.

RUDOLPH C. BOOKSER, OF BUFFALO, NEW YORK.

## RETAINING DEVICE FOR TUNING-PEGS.

SPECIFICATION forming part of Letters Patent No. 448,872, dated March 24, 1891.

Application filed November 1, 1890. Serial No. 370,064. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH C. BOOKSER, a citizen of the United States, residing at the city of Buffalo, in the county of Erie and State 5 of New York, have invented a new and useful Improvement in Retaining Devices for Tuning-Pegs, of which the following is a specification.

This invention relates to the clamping atro tachments which are employed on violins, banjos, and other stringed instruments for preventing slipping of the tuning-pegs.

The object of my invention is to provide a simple retaining device which is readily ap-15 plied to tuning-pegs of ordinary construction, and which will reliably hold the pegs against slipping.

In the accompanying drawings, Figure 1 is a side elevation of a violin-head provided 20 with my improved attachment. Fig. 2 is a 4 are cross-sections of the head in lines x xand yy, Fig. 1, respectively. Fig. 5 is a side elevation showing a modified construction of 25 my invention.

Like letters of reference refer to like parts

in the several figures.

A A represent two clamping-bars applied to the flat side of the violin-head on opposite 30 sides of the tuning-pegs. These bars are preferably formed from a narrow plate of metal by cutting a longitudinal slot in the plate. The plate forming these bars is secured to the head of the instrument by screws pass-35 ing through the end portions of the plate. The bars A A are preferably provided with concave bearings or collars b, which grasp opposite sides of the pegs. If desired, these bearings may be provided with a lining d, of 40 cork, rawhide, or other suitable material, to secure a more reliable grip.

e represents a clamping-screw connecting the two clamping-bars A A and passing through screw-threaded lugs or ears f, formed, 45 respectively, on said bars. Upon turning this screw in the proper direction the clampingbars are caused to approach each other, thereby causing their concave bearings to firmly grasp the necks of the pegs and holding the 50 same against slipping. The bars A A are sufficiently elastic to yield to the proper extent upon turning the clamping-screw.

When the attachment is used on a violinhead, a pair of clamping-bars A A are applied to each side of the head, and each bar 55 is provided with two bearings or collars b, so that one pair of bars serves to hold the two pegs on the same side of the head.

By my improved attachment the tuningpegs may be held with sufficient firmness to 60 prevent slipping of the same, while at the same time avoiding binding of the pegs by

grasping the same too tightly.

In instruments of the same type or manufacture the distance between the peg-holes is 65 usually uniform, and when the clamping attachment is made especially for instruments of a certain manufacture the concave bearings of the clamping-bars coincide with the pegs, so that no difficulty is experienced in 70 fitting the attachment to the instrument. In instruments of different manufacture the distop plan view of the violin-head. Figs. 3 and | tance between the peg-holes varies, however, and in order to render the attachment applicable to instruments of different construction 75 it is necessary to make the attachment adjustable.

As shown in Fig. 5, the adjustable attachment consists of two U-shaped frames, each of which comprises a pair of clamping-bars 80 A A, which are connected at their free outer ends by a clamping-screw g. The two clamping-frames on the same side of the instrument are connected together by a longitudinal adjusting-screw h, arranged in threaded 8: lugs formed at the inner portions of the clamping-frames. Before applying the attachment to the instrument the frames are adjusted at the proper distance apart by turning the same upon the adjusting-screw. 90 After adjusting the frames to the pegs the latter are held against slipping by tightening the clamping-screws, as in the first-described construction.

My improved retaining device is shown in 95 connection with the pegs of a violin; but it is also applicable to the pegs of banjos and other stringed instruments.

I claim as my invention—

1. A retaining device for tuning-pegs, con- 100 sisting of a bar or plate bearing against the side of the peg, and a clamping-screw whereby the bar or plate is forced against the peg, substantially as set forth.

2. A retaining device for a tuning-peg, consisting of clamping-bars applied to opposite sides of the peg, and a clamping-screw connecting said bars, whereby the same are caused 5 to grasp the pegs, substantially as set forth.

3. A retaining device for a tuning-peg, consisting of clamping-bars applied to opposite sides of the peg and provided with a bearing or collar which grasps the peg, and a clamp-10 ing-screw connecting said bars, substantially as set forth.

4. A retaining device for tuning-pegs, consisting of clamping-bars having peg bearings or collars and made adjustable lengthwise, 15 and a clamping-screw whereby the bars are

drawn against the peg, substantially as set

forth.

5. A retaining device for tuning-pegs, consisting of two pairs of clamping-bars, each pair forming a separate clamping-frame and 20 being provided with a clamping-screw, and an adjusting-screw connecting the two clamping-frames, substantially as set forth.

Witness my hand this 30th day of October,

1890.

RUDOLPH C. BOOKSER.

Witnesses: CARL F. GEYER, ALICE G. CONNELLY.