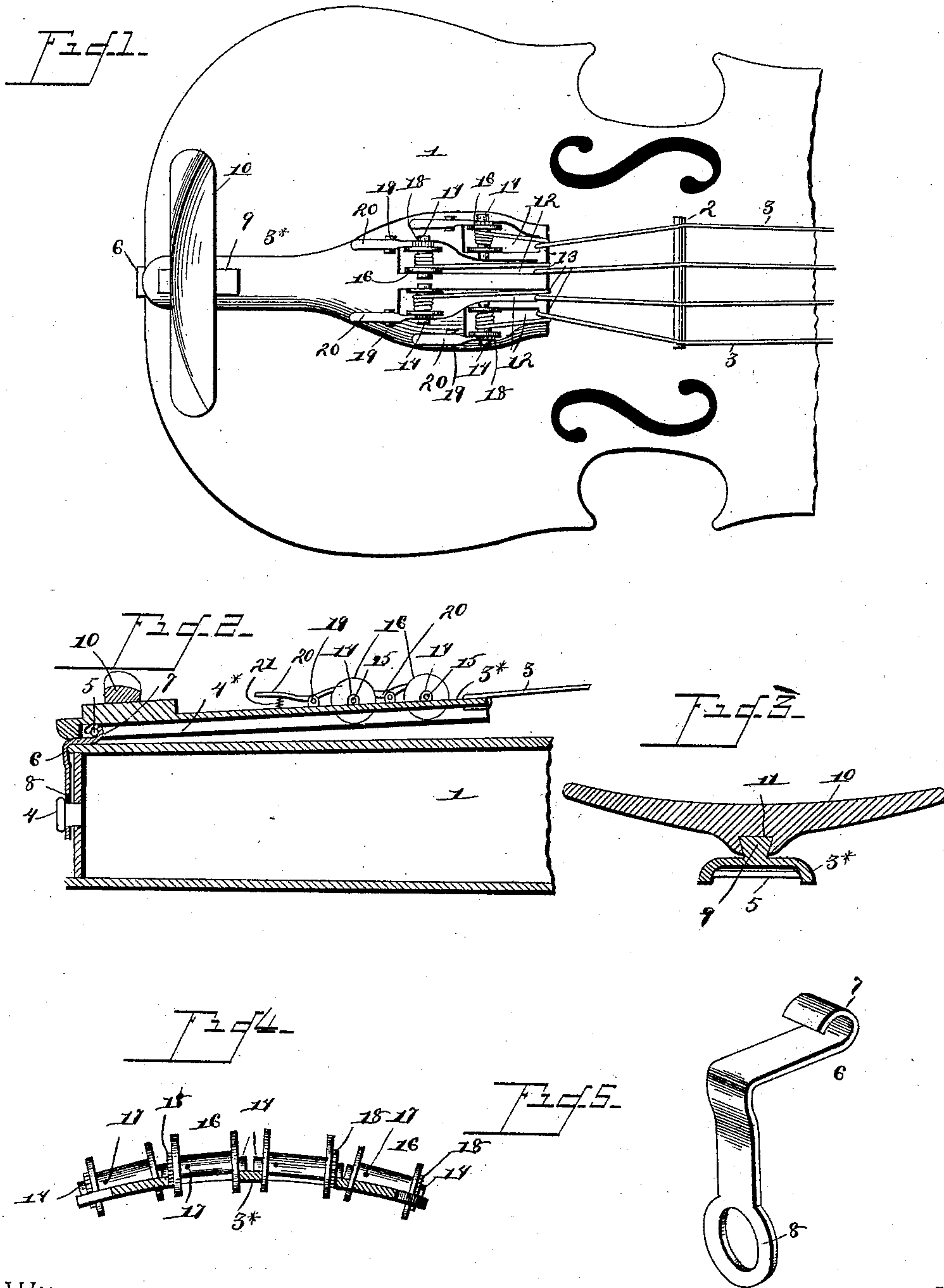


(No Model.)

C. TINDALL.  
VIOLIN TAIL PIECE.

No. 441,716.

Patented Dec. 2, 1890.



Witnesses:

Geo. C. Frick.

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By *his* Attorneys,

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# UNITED STATES PATENT OFFICE.

CHARLES TINDALL, OF UTICA, ASSIGNOR OF ONE-HALF TO NICHOLAS MOOTZ, OF OTIS, KANSAS.

## VIOLIN TAIL-PIECE.

SPECIFICATION forming part of Letters Patent No. 441,716, dated December 2, 1890.

Application filed April 7, 1890. Serial No. 346,928. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES TINDALL, a citizen of the United States, residing at Utica, in the county of Ness and State of Kansas, have invented a new and useful Violin Tail-Piece, of which the following is a specification.

This invention has relation to improvements in tail-pieces for violins; and among the objects in view are to provide a chin-rest and means for adjustably mounting the same upon the tail-piece and connecting the latter with the body of the violin, and to provide means for conveniently taking up the surplus strings, thereby avoiding winding said surplus upon the tuning-pegs or permitting the same to hang loosely.

With the above objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a plan of a portion of a violin provided with a tail-piece constructed in accordance with my invention. Fig. 2 is a central vertical section of the same. Fig. 3 is a detail in transverse section through the chin-rest. Fig. 4 is a similar view in transverse section in front of the winding-spools. Fig. 5 is a detail in perspective of the tail-piece-connecting hook.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 represents the violin, 2 the bridge, 3 the strings, and 4 the tail-stud, all of the usual construction.

3\* represents the tail-piece, provided upon its under side with a recess 4\*, through which there extends transversely a pin 5.

6 represents a sheet-metal connection designed to be arranged between the tail-piece and stud, and the same is of L shape, terminating at one end in a hook 7, for engaging the pin 5, and at its opposite end in an eye 8, for taking over the stud 4, and in this manner it will be observed the tail-piece is removably connected with the violin.

The tail-piece 3\* upon its upper surface and near its rear end is provided with a dovetailed rib 9, extending longitudinally for a short distance along the tail-piece, and mounted upon the rib is a chin-rest 10, the under

portion of which is provided with a dovetail-recess 11 adapted to snugly fit the rib 9. The chin-rest 10 has its upper face concaved, and by the construction just described is adapted to be adjusted longitudinally upon the rib, so as to take under the chin of the performer at a convenient place. The forward end of the tail-piece is provided with a series of slots or openings 12, four in number, one for each string, and the two inner slots extend rearwardly some distance farther than the outer side slots, and at their rear ends are widened, so as to take in rear of the ends of the side slots. The end of the tail-piece at points opposite the slots is provided with grooves 13, and the opposite side edges of the slots are provided with upwardly-projecting bearing studs or ears 14, arranged in pairs, the two front pairs being in advance of the two rear pairs. In each of the pairs of bearing ears are journaled the axles 15 of winding-spools 16, the bodies of which are provided with transverse perforations 17. Each of the axles or shafts 15 is provided with small ratchet-wheels 18, and in rear of said ratchet-wheels there are located perforated bearing-ears 19, in each of which is mounted a pivoted lever or pawl 20, spring-pressed upwardly in rear of its pivots by means of coiled springs 21, whereby the front ends of the levers are maintained in engagement with their respective ratchet-wheels.

In stringing the instrument the rear ends of the string are passed through the perforations 17 of their respective spools and said spools turned until all surplus is taken up, after which the strings are passed once around the end bars 13 at the front end of each of the openings 12 of the tail-piece, and the opposite ends of the strings are connected to the tuning-pegs in the usual manner, only sufficient string being left to wind around the pegs a sufficient number of times to properly connect the strings with the pegs. By this arrangement it will be apparent that all surplus of the strings is neatly wound upon their respective spools, and the spools are maintained against retrograde movement by means of the locking-levers or pawls.

In liberating the strings for the spool it is



simply necessary to depress the rear end of that lever locking that spool to which the string is attached, and after a sufficient quantity has been removed or unwound the lever  
 5 is released and the spool is relocked against any further paying out.

The tail-piece may be constructed of wood, sheet metal, or of any other material desired.

Having thus described my invention, what I  
 10 claim is—

1. The combination, with a violin having a stud projecting from one end, of a tail-piece having a cross-pin near its rear end and an L-shaped connecting device terminating at  
 15 one end in a hook for engaging the cross-pin and at its opposite end in an eye for engaging the stud, substantially as specified.

2. The combination, with the tail-piece of a violin having a dovetailed rib, of a chin-rest  
 20 having a dovetailed recess fitting the rib, substantially as specified.

3. The combination, with the tail-piece of a violin, of a chin-rest adjustably mounted thereon, substantially as specified.

25 4. The combination, with the tail-piece of a violin, of a longitudinally-disposed dovetailed rib mounted upon its upper rear end and a chin-rest having a dovetailed recess formed

in its bottom and adapted to slide upon and snugly fit the rib, substantially as specified. 30

5. A tail-piece for violins, having a series of longitudinally-disposed slots, each of which is provided with a pair of opposite bearings and terminates at its front end close to the front end of the tail-piece, forming a trans-  
 35 verse bar adapted to be encircled by the strings, the two inner slots spread at their rear ends and taking in rear of the rear ends of the shorter side slots, in combination with  
 40 spools mounted in each of the slots, the shafts of the spools being journaled in the bearings, ratchet-wheels mounted on the shafts, and  
 45 pawls pivoted in rear of the ratchet-wheels and engaging the same and terminating beyond their pivots in lever portions, and coiled  
 springs mounted under the rear ends of the pawls for maintaining the same in engagement with the ratchet, substantially as specified.

In testimony that I claim the foregoing as  
 50 my own I have hereto affixed my signature in presence of two witnesses.

CHARLES TINDALL.

Witnesses:

WILSON TAYLOR,  
 D. A. DRAKE.