

H. SCHLEMMER.

PIANO VIOLIN.

APPLICATION FILED SEPT. 30, 1909.

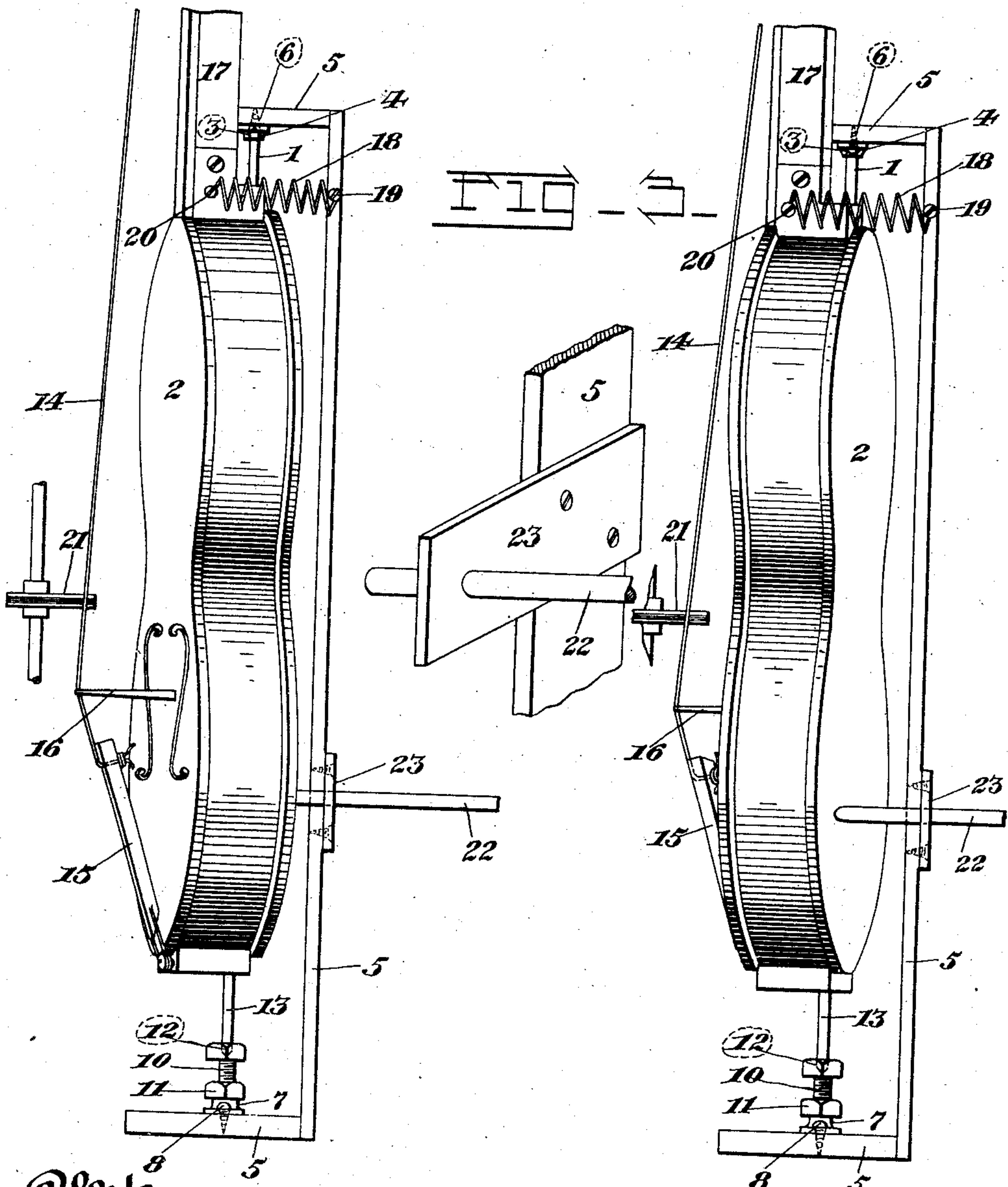
985,459.

Patented Feb. 28, 1911.

3 SHEETS-SHEET 1.

FIG. 1

FIG. 2



Witnesses:
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George G. Anderson.

Inventor:
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By Hugh N. Wagner,
His Attorney.

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3 SHEETS-SHEET 2.

FIG - 4 -

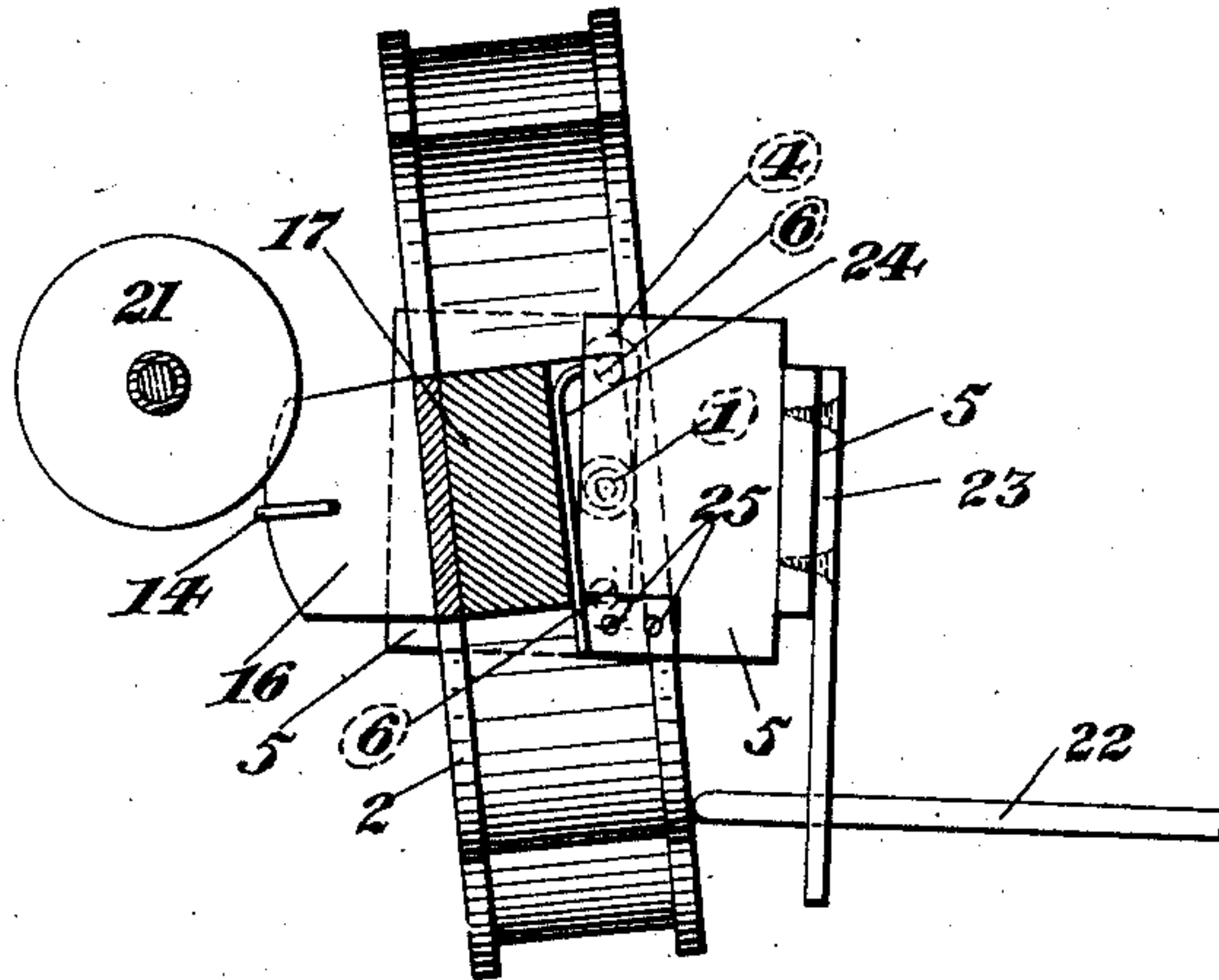


FIG - 5 -

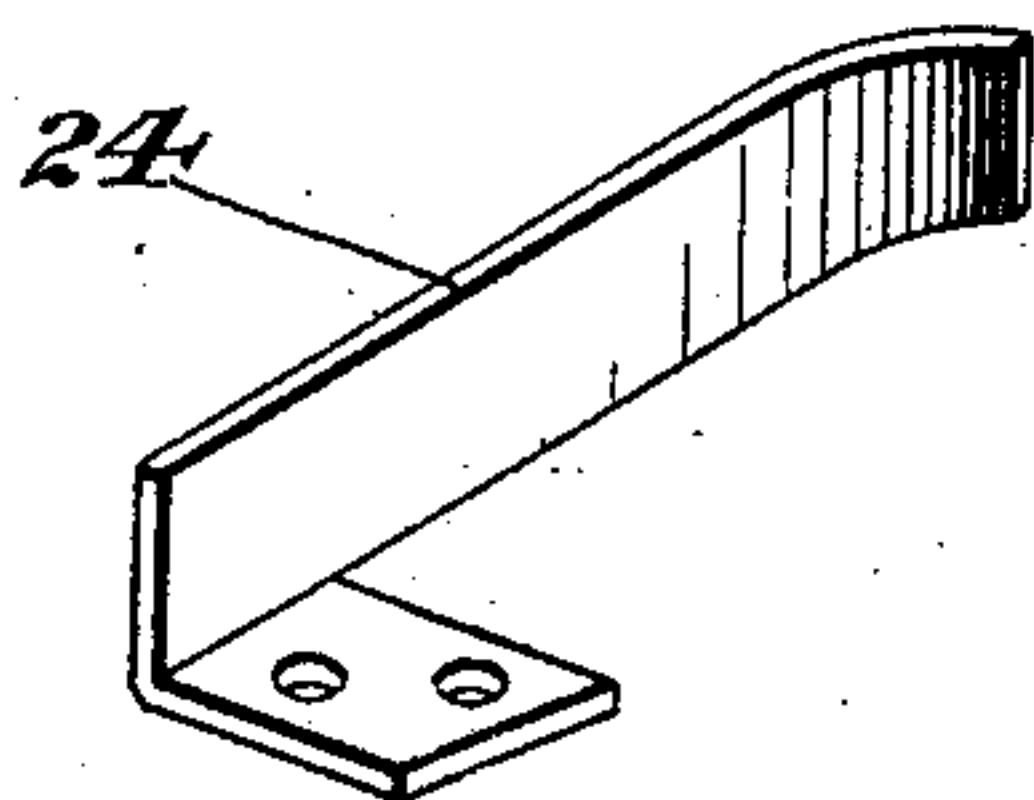
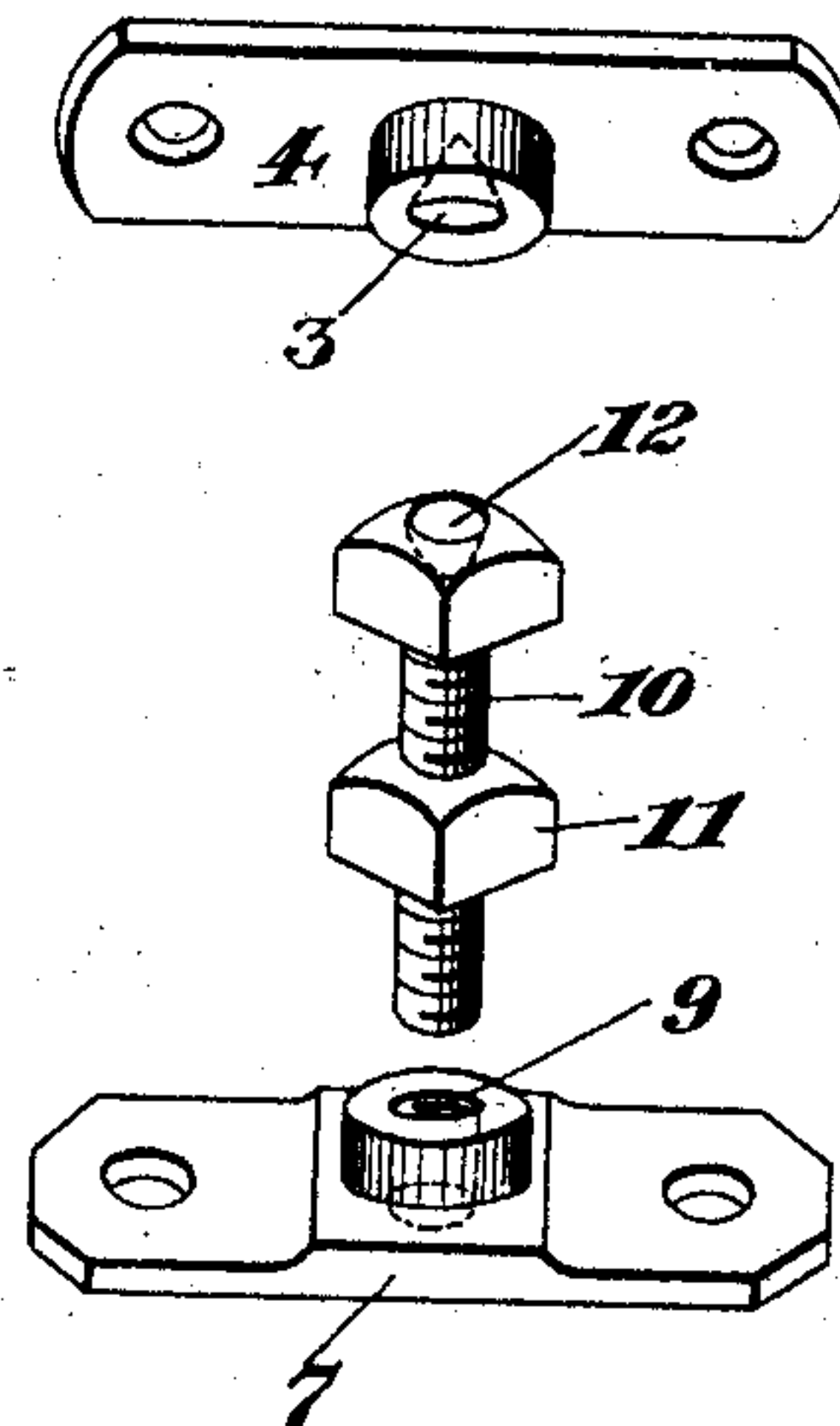


FIG - 6 -



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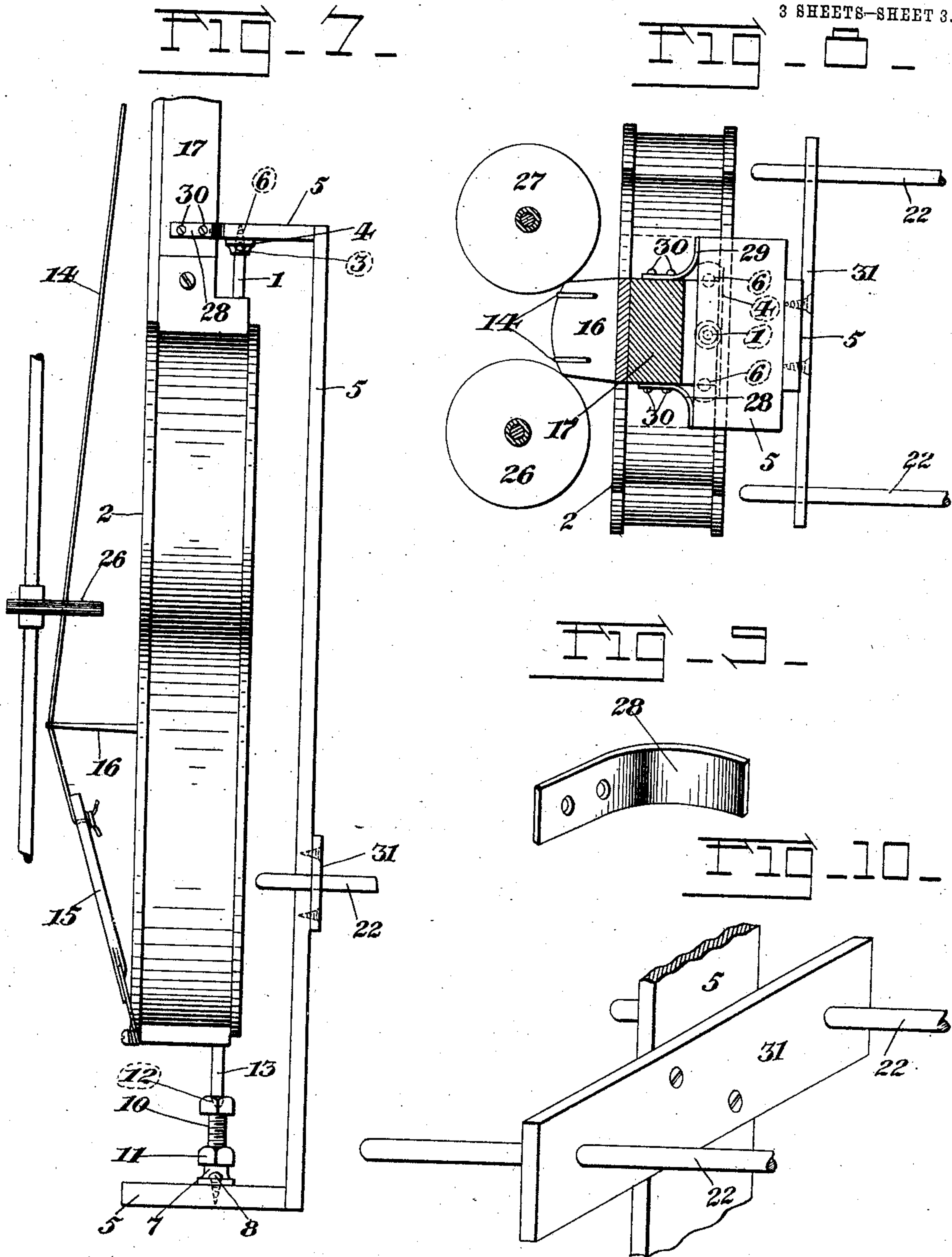
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3 SHEETS-SHEET 3.



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UNITED STATES PATENT OFFICE.

HENRY SCHLEMMER, OF EFFINGHAM, ILLINOIS.

PIANO-VIOLIN.

985,459.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed September 30, 1909. Serial No. 520,268.

To all whom it may concern:

Be it known that I, HENRY SCHLEMMER, a citizen of the United States, residing at the city of Effingham, in the county of Effingham and State of Illinois, have invented certain new and useful Improvements in Piano-Violins, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to means for regulating playing engagement in stringed instruments, especially to instruments of that class in which vibration of a string is caused by a bow (such as violins, violas, violoncel-
15 los, etc.), and has for its object to provide means whereby such instruments are played by mechanical contrivances instead of by hand manipulation of the bow and finger adjustment of the vibratory string-length
20 (technically called "stopping"). As in my copending application Serial No. 401,387, filed November 9, 1907, the player controls each instrument by a manual having the black and white key-board, and, by depres-
25 sion of any key, causes the instrument which that key controls to sound the desired tone.

In the drawings forming part of this specification, in which like numbers of reference denote like parts wherever they oc-
30 cur, Figure 1 is a side elevation of an instrument having a single string, showing the normal position of said instrument; Fig. 2 is a side elevation of same, showing the instrument moved into playing engage-
35 ment with the playing means; Fig. 3 is a perspective view of the actuating rod and a guide for same; Fig. 4 is a top plan view of an instrument, showing an alternate form of the means for holding same out of
40 playing engagement with the playing means; Fig. 5 is a perspective view of the alternate form of spring for holding the instrument out of playing engagement with the playing means; Fig. 6 is a perspective
45 view of the bearings for the instrument; Fig. 7 is a perspective view of the means for actuating an instrument having two strings; Fig. 8 is a plan view of same; Fig. 9 is a perspective view of a spring for
50 holding the instrument out of playing en-

gagement with the playing means; and Fig. 10 is a perspective view of the actuating rods and guide for same.

The rod 1 is secured to the top of the body 2 of the instrument and is adapted to 55 seat in the depression 3 in the casting 4 which is fastened to the frame 5 by the screws 6 or other suitable means. Casting 7, also, is fastened to the frame 5 by the screws 8 and is provided with the screw- 60 threaded aperture 9 which is adapted to receive the bolt 10, said bolt being held in place by the lock-nut 11. The depression 12 in the head of said bolt 10 forms a bearing for rod 13 which is secured to the bot- 65 tom of body 2. String 14 which is secured at one end to the tail-piece 15 passes over bridge 16 and is fastened at the other end (not shown in the drawings) in the usual manner to the top of neck 17. Spring 18 70 is fastened at one end to the frame 5 by the screw 19 and at the other end to the neck 17 by the screw 20, or other suitable means, and normally holds the instrument out of playing engagement with the bow-wheel 21. 75 Rod 22, which is adapted to actuate said instrument and cause string 14 to engage bow-wheel 21 is slidably mounted in the guide 23 and is operated by the depression of a key on the key-board (not shown in 80 the drawings). In Figs. 4 and 5 the alternate form of spring 24 is substituted for the spring 18 and is secured to the frame 5 by the screws 25.

In the preferred form as hereinabove de- 85 scribed the instrument is strung with a single string, but when desirable the instrument can be strung with two strings as shown in Fig. 8, said strings being tuned to different tones. In this form the two 90 bow-wheels 26 and 27 are provided and the instrument is held out of playing engagement with said bow-wheels by the spring 28 and spring 29, each of said springs being fastened to neck 17 by the screws 30. The 95 rods 22 are slidably mounted in the guide 31 and each of said rods is adapted to rotate the instrument into playing engagement with one of said bow-wheels.

The regulation of the playing engage- 100

ment of the instrument is as follows: The depression of a key on the key-board operates the rod 22 which is moved thereby against the body 2 of the instrument and causes said instrument to rotate in the bearing 3 and the bearing 12, whereby string 14 is brought into playing engagement with the bow-wheel 21, said bow-wheel being continually rotated by any suitable means. As long as said key is depressed string 14 is held in engagement with bow-wheels 21 and a tone is produced thereby, but when pressure on said key is released the instrument is returned to its normal position by the spring 18, whereby said string is moved from engagement with said bow-wheel. When an instrument having two strings is played two keys on the key-board govern the playing of said instrument. The depression of one of said keys causes one of the rods 22 to rotate the instrument and to move one of said strings 14 into playing engagement with the bow-wheel 26 adjacent thereto, and when pressure is released on said key spring 28 returns the instrument to its normal position. In the same way, the key which operates the other rod 22 causes same to rotate the instrument in the opposite direction, whereby the other string 14 is brought into playing engagement with bow-wheel 27, but when said key is released the instrument is moved to its normal position by the spring 29.

For the purpose of illustration the instrument depicted in the drawings is of the class in which the note to be played is produced by rotating the instrument having a string tuned to produce such note to a point where said string engages a rotating wheel which serves the purpose of a bow, but it should be understood that not only are violins, violas, 'cellos, and double basses of the said class within the scope of this invention and of the claims, but banjos, mandolins, guitars, and the like are as well; for, to play these last-named instruments, in which the vibration of the string is caused by picking or plucking, instead of by bowing, the mechanism remains unchanged save for the fact that the wheel 21 is equipped with projecting fingers or pins instead of horse-hair or the like.

I claim:

1. In a piano violin, the combination of a stringed instrument having an elongated body and bearing the string longitudinally thereof, a support having upper and lower arms extending therefrom, said instrument being pivotally mounted between said arms upon a longitudinal axis eccentric to said string to permit a limited rotary movement of said string around the pivot points of said instrument, a rotary bowing device,

means for resiliently maintaining said instrument in fixed position, and means for rotating said instrument to move said string against said bowing device.

2. In a piano violin, the combination of an instrument body having a string stretched thereover, a support having arms extended therefrom, said instrument body being pivoted between said arms and having the pivotal axis in a plane common to said string to permit a limited rotary movement of said string about the axis of rotation of said body, means to cause said body to operate on said axis of rotation, and rotary bowing means located in the path of said string.

3. In a piano violin, the combination of an instrument body having a string stretched thereover, a support having arms extended therefrom, said instrument body being pivoted between said arms to permit a limited rotary movement of said string about the axis of rotation of said body, said axis of rotation extending longitudinally along said body and substantially parallel to said string, means comprising a slidably mounted rod bearing eccentrically upon said instrument to cause the latter to rotate, rotary bowing means adapted to bear on said string when said body is rotated, and means opposing said rotating means to return said body to its normal position.

4. In a piano violin, the combination of an instrument body having a string stretched thereover, a support having upper and lower arms projected therefrom, bearing rods extending from said instrument body in a plane common to said string and support, said body being pivoted between said arms, means comprising a slidably mounted rod bearing on said body at one side of the axis of said bearing rods, and adapted to impart a rotary movement to said body, and means for returning said body to normal position.

5. The combination of an instrument bearing a pair of strings, said strings being tuned to different pitches, a pair of rotating wheels to play said instrument, a support, said instrument being revolvably mounted in said support, a pair of rods, one of said rods being mounted to rotate said instrument and cause one of said strings to engage one of said wheels, the other said rod being mounted to rotate said instrument and cause the other said string to engage the other said wheel, a pair of springs to hold said strings normally out of engagement with said wheels, guides for said rods, and means for operating said rods.

6. The combination of an instrument bearing a string, a support, a rod secured to the top of the body of said instrument, a casting secured to said support, said casting being provided with a depression in which said

rod bears, a rod secured to the bottom of the
body of said instrument, a casting
said support, a bolt borne by said
tioned casting, the head of sa
5 provided with a depression in which
last-mentioned rod bears, a lock-nut borne
by said bolt, means for playing said instru-
ment, means for rotating said string into en-
gagement with said playing means, and

means for holding said string normally out of
of engagement with said playing means.

In testimony whereof I have affixed my
signature in presence of two witnesses.

HENRY SCHLEMMER.

Witnesses:

CHAS. FENERBORN,
A. J. WORMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."

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