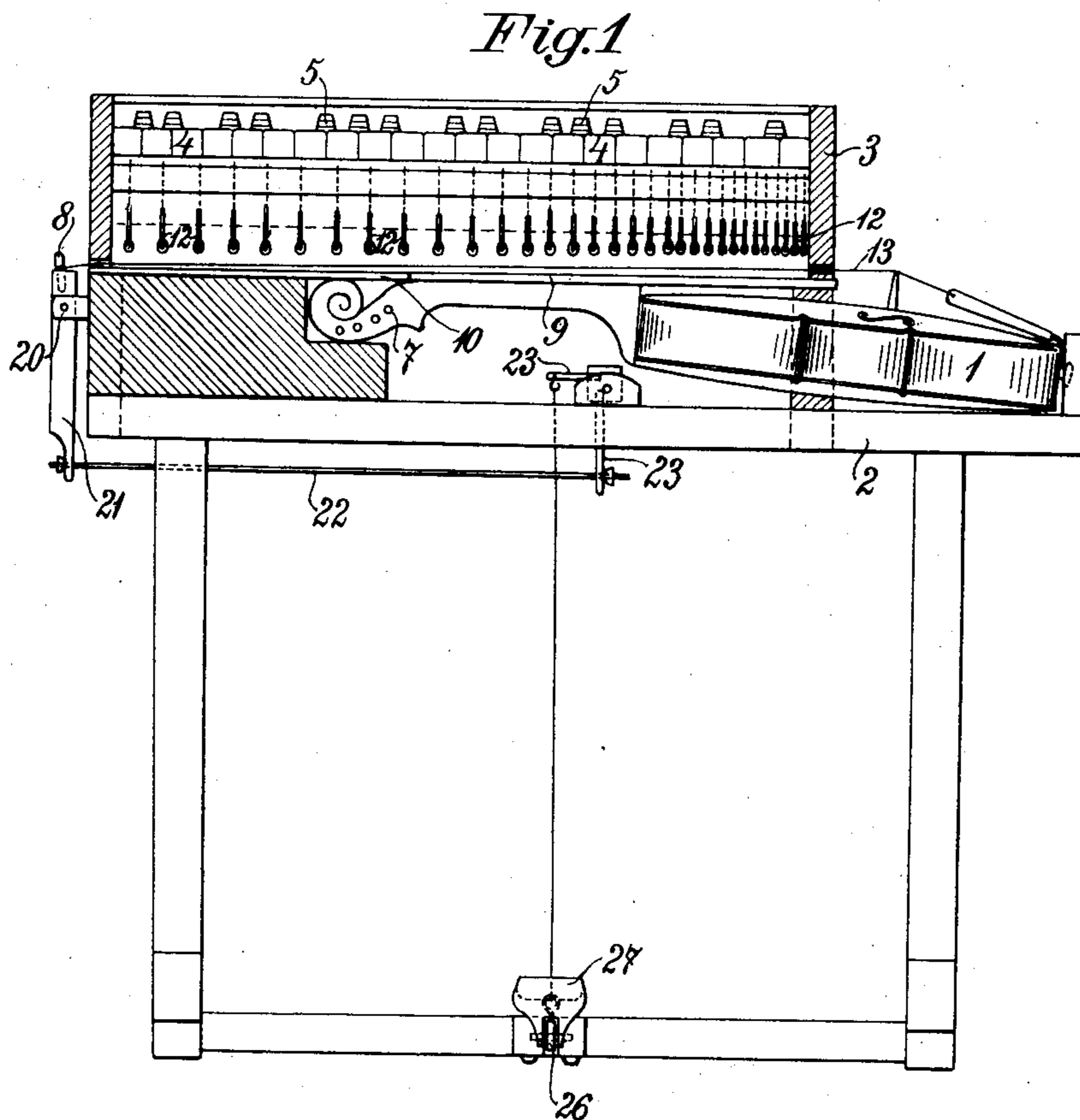


999,427.

L. BAJDE.
PIANO VIOLIN.
APPLICATION FILED JULY 9, 1910.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.



Witnesses
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UNITED STATES PATENT OFFICE.

LUDWIG BAJDE, OF SCHISCHKA, NEAR LAIBACH, AUSTRIA-HUNGARY.

PIANO-VIOLIN.

999,427.

Specification of Letters Patent.

Patented Aug. 1, 1911.

Application filed July 9, 1910. Serial No. 571,199.

To all whom it may concern:

Be it known that I, LUDWIG BAJDE, subject of the Emperor of Austria-Hungary, residing at Schischka, near Laibach, in Carniola, Austria-Hungary, have invented certain new and useful Improvements in Piano-Violins, of which the following is a specification.

This invention relates to improvements in piano violins and has for its object to provide an improved key-board combined with a pedal mechanism and arranged to be operated by the left hand of the performer in playing bow instruments.

The invention consists in providing a series of levers that are operated by keys similar to those of a piano and adapted to engage one of the strings of the violin; a series of levers adapted to engage another string of the violin, the first series of levers being operable independently of the second series; and in providing means for operating both series of levers simultaneously.

In the accompanying drawings Figure 1 is a front elevation, partly in vertical longitudinal section, of a keyboard constructed according to this invention with pedal-mechanism and an instrument arranged on a table. Fig. 2 is an end elevation thereof, the side of the keyboard case having been removed and Fig. 3 is a plan on a larger scale of two keys with appurtenant pressing devices.

On the table 2 supporting the bow-instrument 1 there is arranged a case 3 which contains a keyboard comprising white and black keys 4 and 5 adapted to be operated with the left hand. In the example shown, the strings 13 and 14 of the instrument are lengthened beyond the usual peg-box or neck 7 of the instrument and the ends of the strings are connected to pegs 8 which allow of tightening the strings. An extension piece 10 is attached to the usual fingerboard 9 to correspond with the extended part of the strings.

Each of the keys 4, 5 is connected by an adjustable rod 11 to a corresponding pivoted lever 12 the free end of which is covered with leather or is finished with a strip of yielding material. All the levers 12, when their respective keys are depressed, act upon one and the same string 13 and are so arranged as to press this string against the finger board 9 (10) at points corresponding to the various note-positions. The string

which is thereby acted upon as if by the fingers of the player, can be caused to sound by an ordinary bow 15 or other means.

If the instrument has two strings 13 and 14 as in the example shown, another series of pressing levers 16 is provided for the other string 14. These levers 16 are similarly arranged apart at intervals corresponding to the desired note-positions; they are connected by corresponding adjustable rods 17 to levers 18 arranged between and preferably pivoted to the keys. The free forward ends of these levers are provided with pins which extend freely upward through the adjacent key. A press knob 19 is provided on the end of the pin that projects beyond the key. This arrangement allows of operating either the keys 4, 5 alone or a key and a pressing device together. In the latter case the two strings 13 and 14 can be pressed simultaneously against the finger board 9 (10) at the desired points and can also be played simultaneously with the bow so as to produce a chord of two notes.

The pegs 8 which are constructed after the fashion of the usual violin pegs may be arranged as shown on the upper end of the lever 21 which is pivoted at 20. The lower end of this lever is connected by means of an adjustable rod 22, a bell-crank lever 23 and a cord 24 or the like to the end of a lever 25. The other end of the lever 25 engages the underside of a pedal lever 26 which carries at its other end the pedal 27. The operator's foot for operating the pedal-mechanism is placed with the heel on the pedal 27 and with its forepart upon a firm support. By alternately depressing and raising his heel the operator tightens and slackens the string and thus can execute a tremolo movement. Since the up and down motion of the heel is easier and more convenient than the usual treadle movement in which the pressure is exerted by the forepart of the foot, the foot does not become tired even after long-continued tremolo playing.

If desired the tightening and slackening of the string can be produced also by means of a knee swell.

Claim.

1. The combination with a violin and a keyboard; of a series of levers operated by the keys of the key-board to engage one of the strings of the violin, a series of levers adapted to engage another string of the latter, and means to operate the last named

levers simultaneously with the key-operated levers.

2. The combination with a violin having two strings; of two series of levers to engage 5 said strings, means adapted to actuate one series of levers independently of the other series and means to simultaneously actuate both series of levers.

3. The combination with a violin having 10 two strings and a keyboard; of a series of levers operated by the keys of said keyboard to engage one of said strings, a second series of levers to engage the other string of the violin, and means for operating the second series of levers and keys simultaneously.

4. The combination with a violin having two strings, and a keyboard; of a series of

levers to engage one of said strings, means connecting said levers with the keys of the 20 keyboard, a second series of levers to engage the other violin string, operating levers pivoted between the keys and connected to the second series of levers, and knobs on the operating levers to engage the keys to de- 25 press the latter, whereby both series of string-engaging levers are operated simultaneously.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 30

LUDWIG BAJDE.

Witnesses:

JOSEF RUBARCK,
AUGUST FUGGER.

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