

(No Model.)

H. FASCHER.
PIANO TUNING PIN.

No. 460,124.

Patented Sept. 29, 1891.

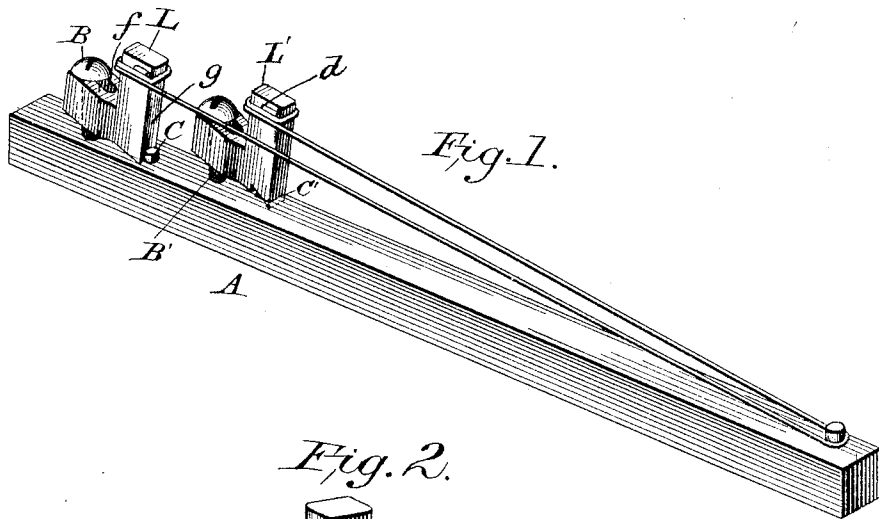
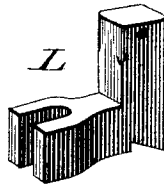


Fig. 2.



Witnesses:
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PIANO TUNING-PIN.

SPECIFICATION forming part of Letters Patent No. 460,124, dated September 29, 1891.

Application filed July 22, 1890. Serial No. 359,575. (No model.)

To all whom it may concern:

Be it known that I, HERMANN FASCHER, a citizen of the United States, residing at St. George, in the county of Washington and Territory of Utah, have invented a new and useful Tuning Apparatus for Pianos and other String Instruments, of which the following is a specification:

My invention relates to improvements in stringing and tuning musical string instruments, especially pianos.

It is a well-known fact that in pianos as made at present the strings are wound around metal tuning-pins, which are inserted in a wooden plank or block and held in position by their own friction. It is also well known that through atmospheric changes and other causes the positions of these pins change, and finally they become loose, so that they need frequent tuning and repairing. In my invention the strings are wound around one arm of a metallic elbow-lever, the angle of which rests against a pin or other projection or recess, while the tension of the string is regulated by a machine-screw, which is applied to the other arm of said lever. The supporting pin, projection, or recess, as well as the machine-screw, being inserted into a metallic plate, which may be integral with or a continuation of the main string-frame, or a separate plate resting against such frame or otherwise rigidly fastened, the strings are held in pitch with perfect rigidity, while they may be tuned with the greatest ease and exactness with an ordinary screw-driver or thumb-piece made integral with the screw-head.

The accompanying drawings further illustrate the actions of the levers in natural size.

Figure 1 represents a side view of the metallic plate, to which the strings are fastened, and two levers in position. A A represents the metallic plate; L L', the levers; c c', the supporting pin or recess fastened to the plate or cast integral therewith; B B', the machine or thumb tuning-screws.

Fig. 2 represents perspective of lever L, showing fork through which the screw passes.

In order to fasten the string, the levers are

placed in the position shown in Fig. 1, so that the lever-arm holding the string shall be inclined as much as possible toward the fastening at the other end of string. The string is then wound around the lever-arm twice and the end drawn through the hole *d* provided for that purpose and drawn as tight as possible by some suitable hand-tool. The end of the string is then bent over, so as to prevent it from slipping back, and the tuning-screw is screwed down until the string has acquired the desired tension.

I am aware that metallic string-fasteners have been invented before; but such could only be used with a string-frame cast for the purpose, whereas my invention may be applied to any grand or square piano by simply tapping the tuning-pin holes in the cast-iron plate to fit suitable machine-screws (or if such holes are too close together new ones may be drilled) and providing suitable supports in the shape of short pins for the tuning-levers to rest against, and it may be applied to any upright piano by fastening a metallic plate with the levers, supports, and screws already in place, and made to suit the peculiar style of piano to the tuning-pin block and permitting it to rest upon the cast-iron frame upon which the pin-block rests. In this manner it may be applied to old and already finished pianos as well as to those in course of construction, and thus be of a more extended usefulness. It will be readily seen that a similar plate of suitable size may be fastened to the head of any guitar, banjo, or other string instruments.

I therefore claim as my invention—

1. The combination, in a metallic elbow tuning-lever, of lever L, with grooved apex *g*, and pin *c*, as described.

2. The combination, in a metallic elbow tuning-lever, of lever L, with an open forked or slotted arm *f* for the passage of the adjusting-screw, as described.

3. The combination, in a metallic string fastening and tuning device, of main string-plate A A, a set of levers L, with string-holes *d*, grooves *g*, pins or other projections *c*, slot *f*, and machine or thumb screws B, all arranged

to operate substantially as and for the purpose
above set forth.

4. The combination, in a metallic string
fastening and tuning attachment, of a set of
5 levers L, with string-holes *d*, pins *e*, forks or
slots *f*, and a set of machine or thumb screws
B, with an independent attachable and de-

attachable plate A A, as and for the purpose
above set forth.

HERMANN FASCHER.

Witnesses:

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