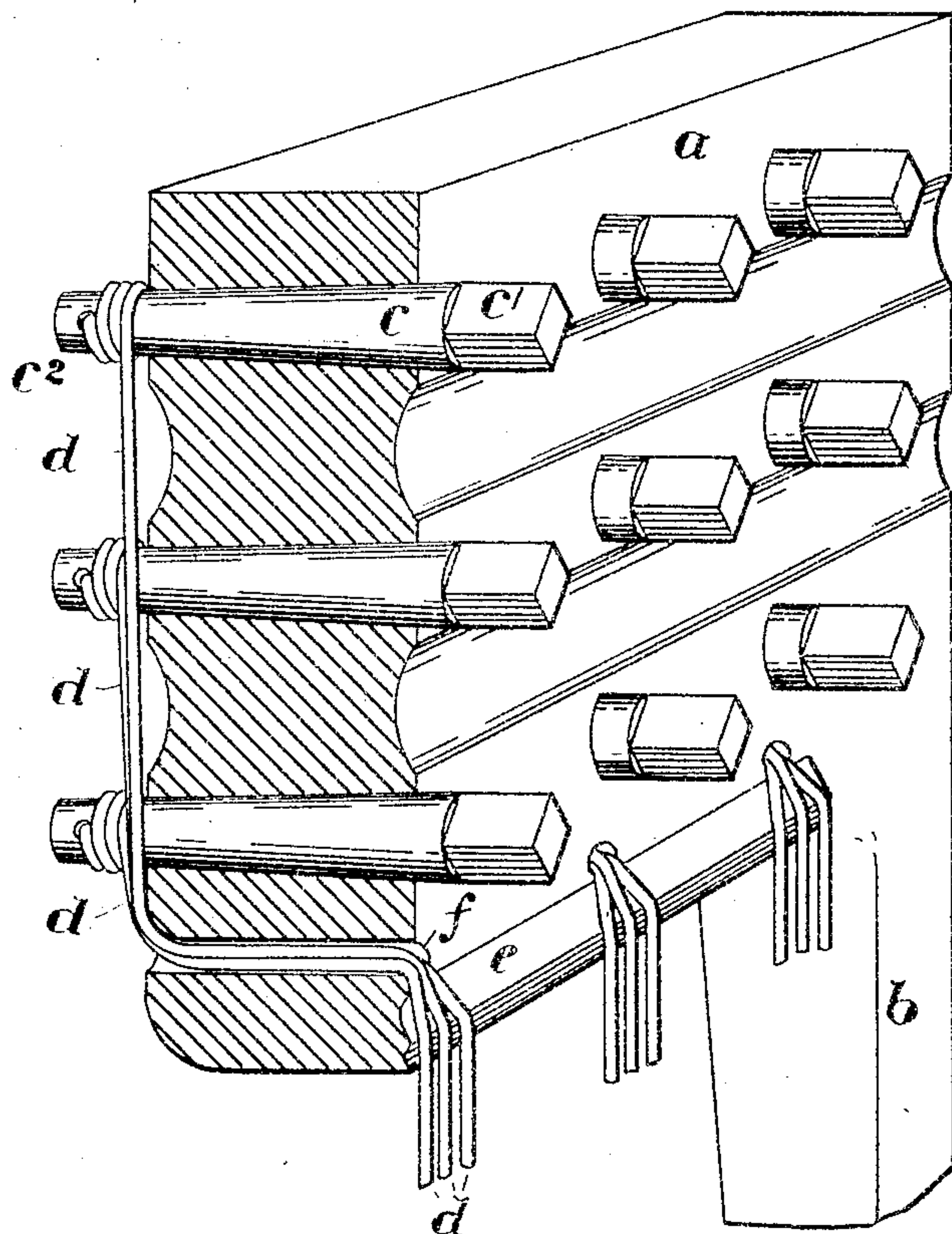


No. 780,889.

PATENTED JAN. 24, 1905.

C. KEEN.
PIANO TUNING DEVICE.
APPLICATION FILED APR. 28, 1904.



Witnesses:

J. M. Fowler Jr.
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UNITED STATES PATENT OFFICE.

CLEMENT KEEN, OF JOHANNESBURG, TRANSVAAL.

PIANO-TUNING DEVICE.

SPECIFICATION forming part of Letters Patent No. 780,889, dated January 24, 1905.

Application filed April 28, 1904. Serial No. 205,318.

To all whom it may concern:

Be it known that I, CLEMENT KEEN, piano-forte-tuner, a British subject, residing at corner of Main and Mooi streets, city and suburban township of Johannesburg, in the Colony of the Transvaal, have invented certain new and useful Improvements in the Construction of Piano-Tuning Devices, of which the following is a specification.

This invention relates to the construction of piano-tuning devices; and it consists in the hereinafter-described improvements therein, whose object is to maintain the piano-strings at their proper pitch for a longer period than is possible by other known methods.

The accompanying drawing illustrates the invention.

a is the wrest-plank, made of metal and integral with the iron frame of the piano, of which frame b is one of the vertical side members.

The wrest-pins c pass entirely through the wrest-plank and are slightly tapered from front to back. Their front or larger ends c' are squared, as usual, for taking the tuning-key, and the wires are fixed to and wound around their smaller ends c'' , which project from the back of the wrest-plank. In consequence of this latter arrangement the wires d after passing over the usual top bridge e are led through holes f formed through the wrest-plank, the several wires corresponding to each note being preferably led through one hole and thence distributed to their respective wrest-pins, as illustrated. The wall of the lower end of each of the apertures f is curved or rounded off in the direction of the wrest-pins c , so that while the apertures f extend through the wrest-plank at right angles to the plane

of the main portion of the wires d for producing a maximum amount of friction the said wires are drawn longitudinally through said apertures by operation of said wrest-pins without danger of breaking the wires. It will be noted that the apertures f extend at right angles to the plane of the wires d above the wrest-plank and also at right angles to the plane of wires d below the wrest-plank, so that the said wires in being passed through said apertures must be given two right-angular turns, and the curved portion of the wall of said apertures at the lower end thereof makes possible the drawing of the wires longitudinally through said apertures. In practice such a tapered pin should not be roughened, as in the case of the present cylindrical pins, it having been found that the smoother its surface and that of the hole in which it is fitted the more satisfactory are the results obtained.

I claim as my invention—

In a piano-tuning device, the combination of a wrest-plank formed with apertures extending therethrough, the piano-wires extending through said apertures and lying in planes at each side of said wrest-plank at right angles to the plane of said apertures, each of the apertures having its wall curved or rounded off at one end, and wrest-pins extending through said wrest-plank at right angles to the plane of said piano-wires.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CLEMENT KEEN.

Witnesses:

HAROLD E. KISCH,
W. HILLMAN NUELAP.