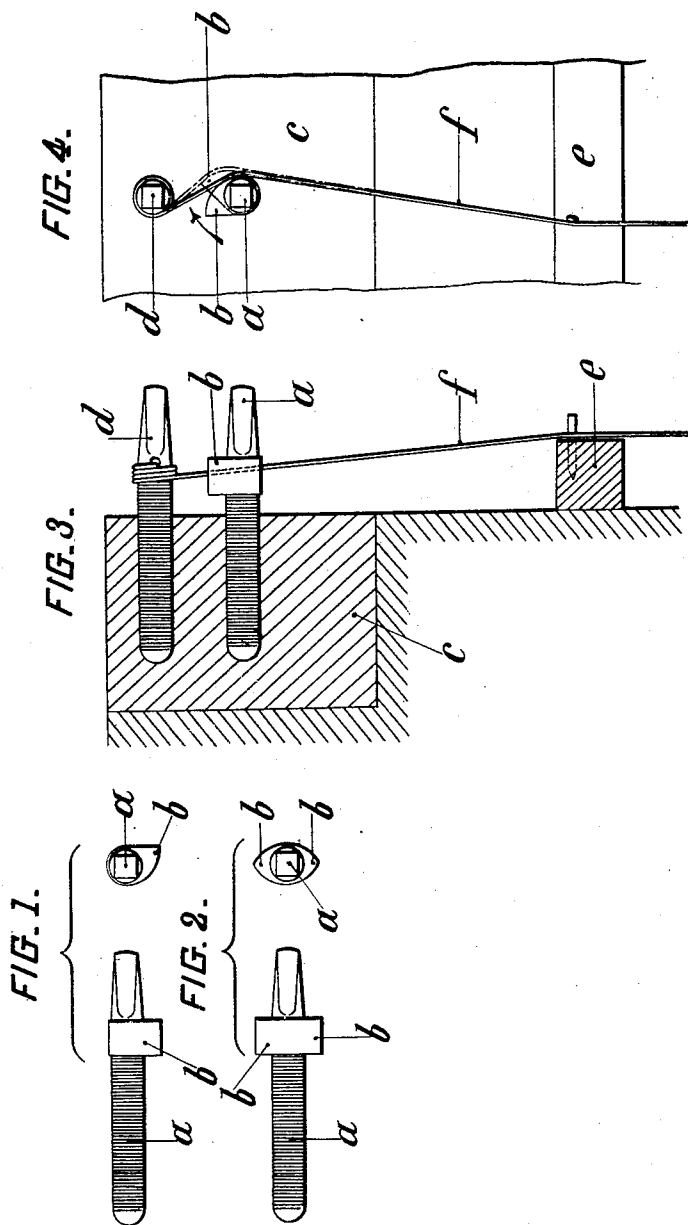


(No Model.)

L. A. W. SARRAMIAC.
TUNING PIN FOR PIANOFORTES.

No. 547,036.

Patented Oct. 1, 1895.



Witnesses:
L. M. Hachichlager,
Fred. C. Mowat.

Inventor
Louis A. W. Sarramiac,
By Briesen Knautz
his attorney.

UNITED STATES PATENT OFFICE.

LOUIS ALPHONSE WILLIAM SARRAMIAC, OF AGEN, FRANCE.

TUNING-PIN FOR PIANOFORTES.

SPECIFICATION forming part of Letters Patent No. 547,036, dated October 1, 1895.

Application filed June 19, 1895. Serial No. 553,261. (No model.) Patented in France June 2, 1892, No. 222,034,

To all whom it may concern:

Be it known that I, LOUIS ALPHONSE WILLIAM SARRAMIAC, of the city of Agen, Lot-et-Garonne, France, have invented a Tuning-Pin for Pianofortes and other Stringed Musical Instruments, (for which I have obtained Letters Patent in France for fifteen years, dated June 2, 1892, No. 222,034,) of which the following is a full, clear, and exact description.

My invention has for its object to provide a tuning-pin for pianos and other stringed instruments whereby accurate tuning of the instrument is more easily obtained and is maintained for a much longer period than with the ordinary wrest-pins, which are liable by frequent turning to yield under the tension of the strings.

My improved tuning-pin is a solid wrest-pin provided with one or more cams eccentric to the axis thereof, which wrest-pin is fixed in the wrest-plank in such position as to bear against the string, so as to slightly deflect it from the axis of the pin when the tuning-pin is turned for the purpose of tuning the string.

In the accompanying drawings, forming part of this specification, Figures 1 and 2 represent side and end views of two forms of the improved tuning-pin. Fig. 3 is a sectional elevation, and Fig. 4 a face view, of part of the framing of a piano, showing the tuning-pin applied.

The same letters of reference denote like parts in all the figures.

d is the ordinary wrest-pin, and *a* is the tun-

ing-pin provided with a cam or cams *b* eccentric to the axis thereof. The pin, which may be screw-threaded, is mounted in the wrest-plank *c* between the ordinary wrest-pin *d* and the wrest-plank bridge *e*, the string *f* being tangential to the cam *b*. The string *f* is put in tension by means of the ordinary wrest-pin *d*, and tuned by slightly turning the tuning-pin *a*, so as to cause its cam *b* to deflect the string at right angles to the axis of the pin, as shown in dot and dash lines in Fig. 4. By this means great accuracy and permanency of tuning is obtainable.

In Fig. 2 the tuning-pin *a* is provided with two cams *b*, by either of which pressure can be applied to the string, according as the pin is turned to the left or right.

I claim—

A solid tuning-pin for the strings of pianos and other stringed instruments, having one or more cams *b* eccentric to the axis thereof and adapted to deflect the string at right angles to the axis of the pin, in conjunction with the ordinary wrest-pin to which the string is attached, as specified.

The foregoing specification of my tuning-pin for pianofortes and other stringed musical instruments signed by me this 4th day of June, 1895.

LOUIS ALPHONSE WILLIAM SARRAMIAC.

Witnesses:

J. PAULAR,

JOHN PRESTON BEECHER,

JEAN JOSEPH LANDIE.