

(No Model.)

W. A. SMITH.  
TUNING PIN.

No. 488,843.

Patented Dec. 27, 1892.

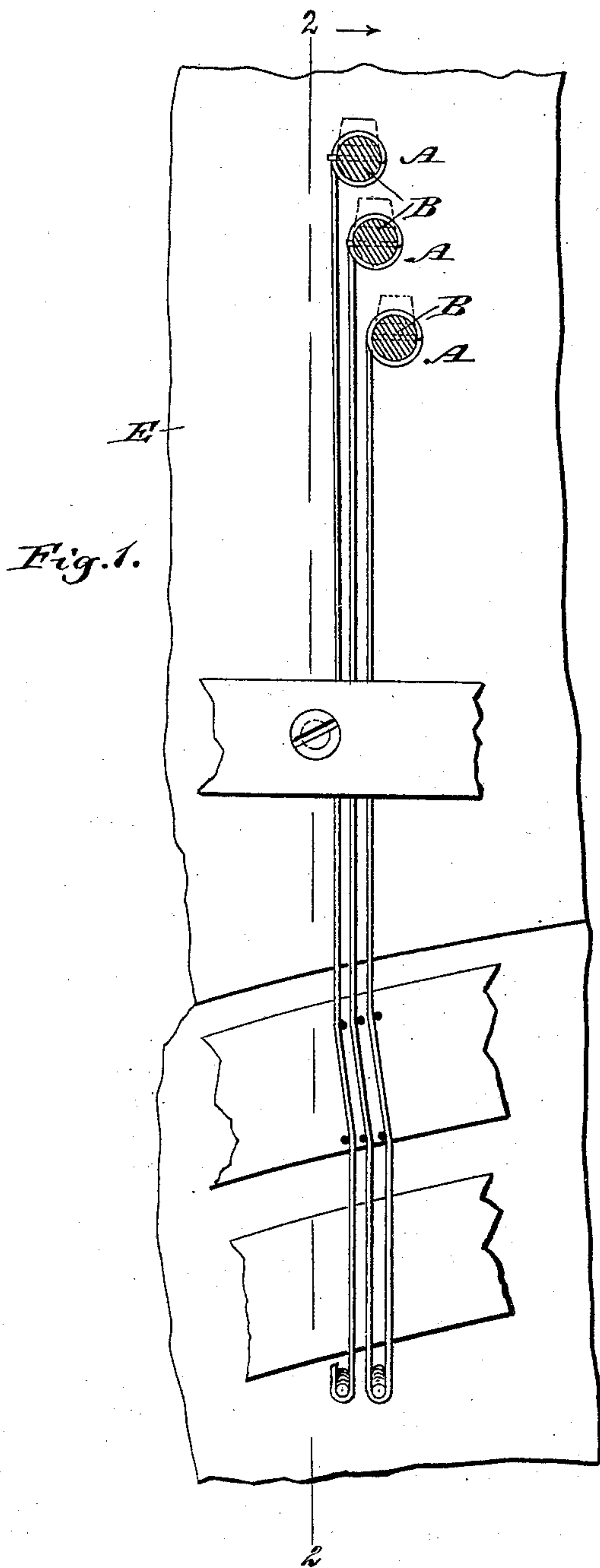


Fig. 1.

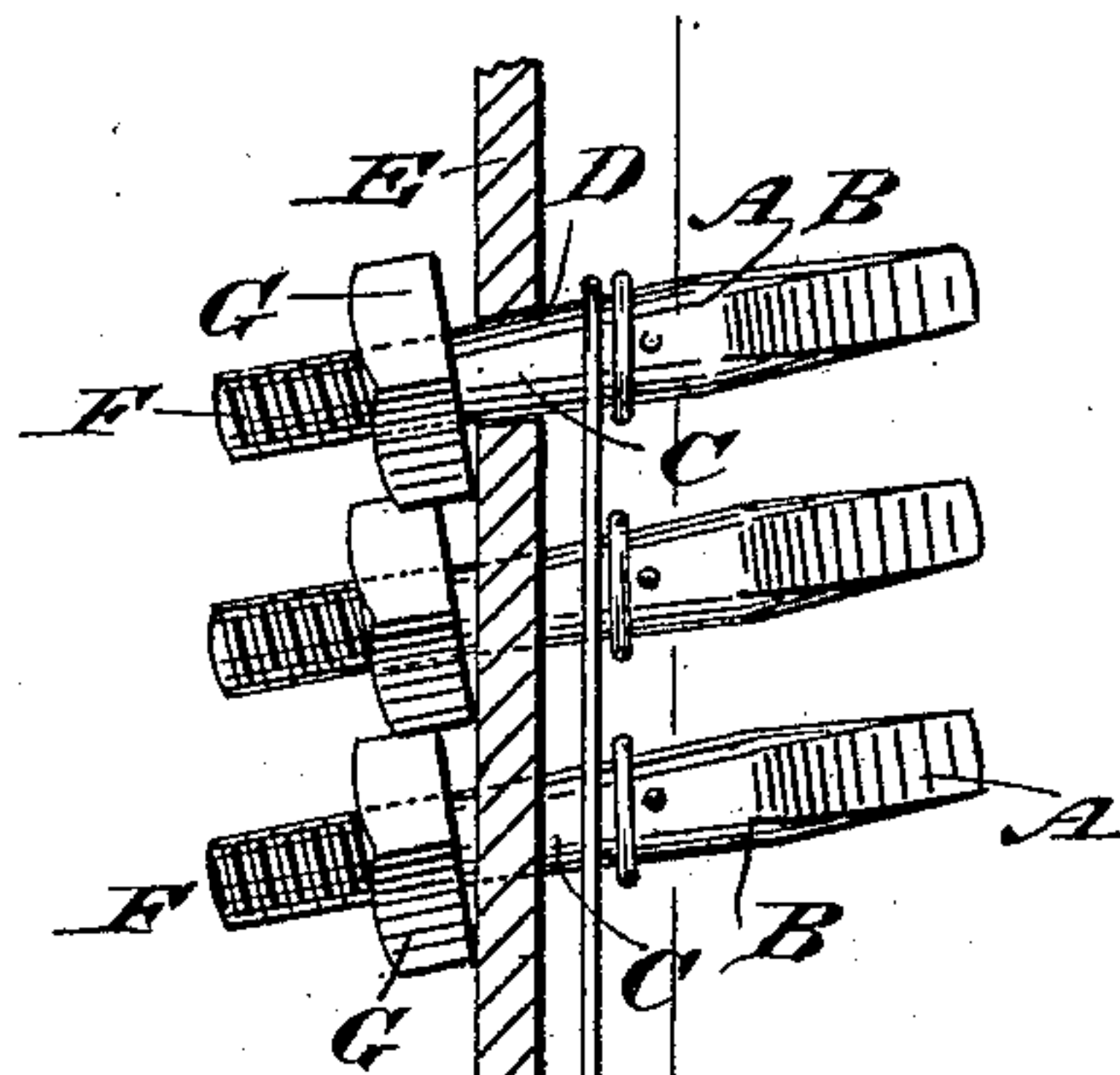


Fig. 2.

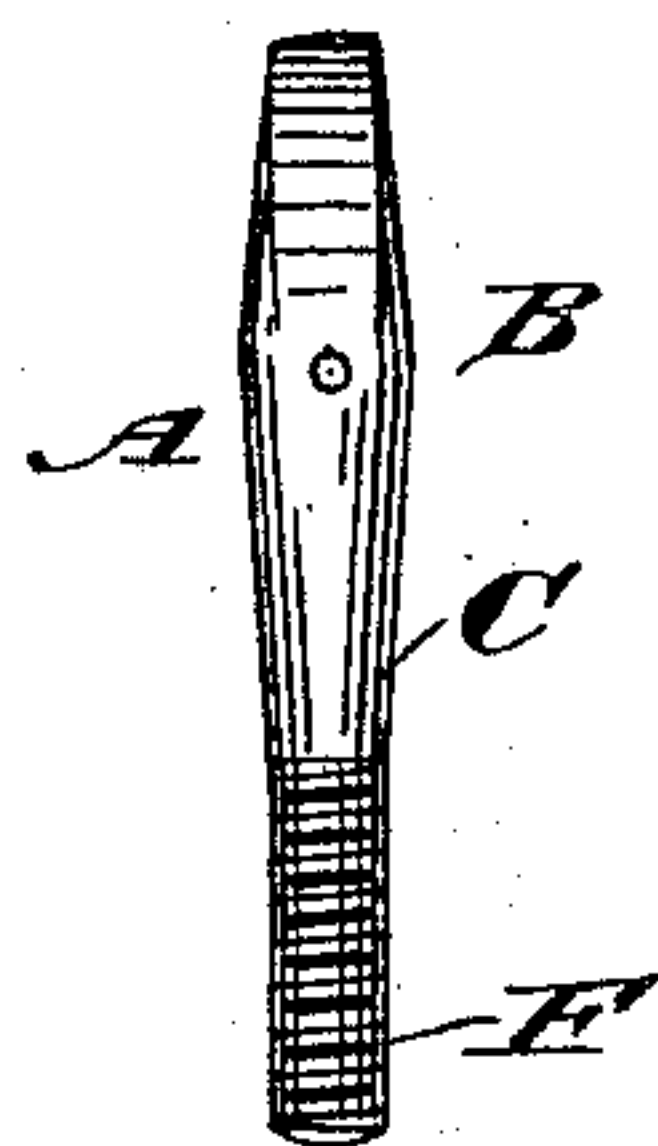


Fig. 3.

WITNESSES:

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BY

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# UNITED STATES PATENT OFFICE.

WILLIAM A. SMITH, OF BUTTE CITY, MONTANA.

## TUNING-PIN.

SPECIFICATION forming part of Letters Patent No. 488,843, dated December 27, 1892.

Application filed March 25, 1892. Serial No. 426,370. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. SMITH, of Butte City, in the county of Silver Bow and State of Montana, have invented a new and Improved Tuning-Pin, of which the following is a full, clear, and exact description.

The invention relates to tuning pins for stringed musical instruments, such as square and upright pianos, &c.

10 The object of the invention is to provide a new and improved tuning pin, which is simple and durable in construction, and arranged to prevent undue wear and to keep the instrument in the proper tune for a long time.

15 The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claim.

20 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

25 Figure 1 is a sectional front view of the improvement as applied, on the line 1—1 of Fig. 2; Fig. 2 is a sectional side elevation of the same on the line 2—2 of Fig. 1; and Fig. 3 is a side elevation of the pin.

30 The improved tuning pin A, is formed with the usual head B, on which is wound the string of the musical instrument, the upper end of the said head being square for convenient engagement with the tuning key. The shank C, of the pin A is tapering and fits into a correspondingly shaped aperture D, formed in the metallic backing E, of the frame of the instrument, said aperture D being arranged in an inclined position so that the tuning pin stands at an angle to the backing E of the frame. It is understood that  
40 the slant of the pin A is outward, so that the pin forms an obtuse angle with the backing, the angle being taken in line with the string.

On the lower end of the tapering shank C is formed a reduced, threaded part F, on which screws a nut G, adapted to abut on the rear face of under side of the backing E, to prevent the pin A from becoming detached from the piano frame. The nut G permits of turning the pin A in its bearing in the slanting aperture D for drawing the string to the proper pitch, in the usual manner.

It will be seen that when the pin has been turned to stretch the string to the proper pitch, the pin is not liable to turn in its bearing, on account of being tapering and being arranged at an angle to the piano frame, as described. It will be further seen that this pin is very simple, strong and durable, very cheap to manufacture, and is arranged to keep the instrument in tune for a long period. It will be further seen that any wear on the shank of the pin is readily taken up by the nut G which, when screwed up, draws the tapering shank farther into the aperture D, thus taking up any existing wear.

55 Having thus described my invention, I claim as new and desire to secure by Letters Patent,—

The combination with the metallic backing of the frame provided with slanting conical apertures, of a pin comprising a head for connection with the string, a tapering shank fitted into the said conical slanting aperture to stand at an angle from the face of the said backing and a reduced threaded part extending from the small end of the said tapering shank and a nut engaging the said threaded shank part and abutting against the rear surface of the said backing, substantially as shown and described.

WILLIAM A. SMITH.

Witnesses:

THEO. G. HOSTER,  
E. M. CLARK.