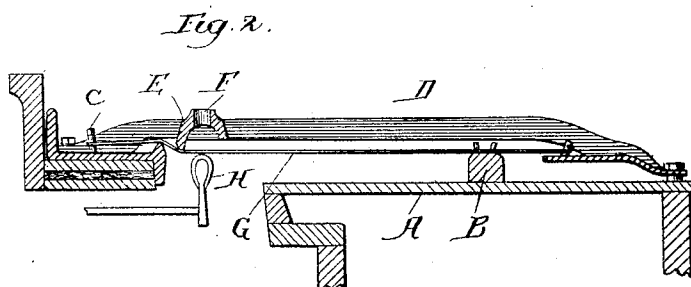
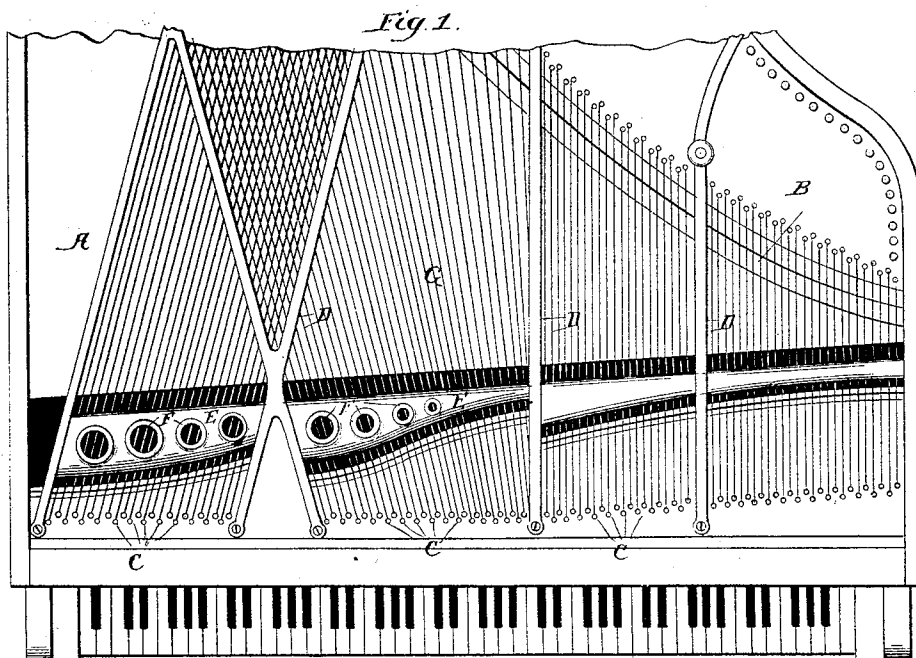


(No Model.)

J. SCHNORR.
STRING BEARING FOR PIANOS.

No. 572,032.

Patented Nov. 24, 1896.



Witnesses:

H. B. Hallock

S. J. Williamson

Inventor:

Julius Schnorr

by Geo. H. Holzgate

Attorney.

UNITED STATES PATENT OFFICE.

JULIUS SCHNORR, OF WOODBURY, NEW JERSEY.

STRING-BEARING FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 572,032, dated November 24, 1896.

Application filed April 6, 1896. Serial No. 586,394. (No model.)

To all whom it may concern:

Be it known that I, JULIUS SCHNORR, a citizen of the United States, residing at Woodbury, county of Gloucester, and State of New Jersey, have invented certain new and useful Improvements in String-Bearings for Pianos, of which the following is a specification.

My invention relates to a new and useful improvement in sound-sustaining devices for bass part of pianos and is especially adapted for use in connection with grand pianos. In pianos of this description as ordinarily constructed the strings by which the sound is produced are passed through plugs in the immediate vicinity of the point at which the hammer strikes said strings, and experience has shown that great accuracy is required to aline these plugs so that all of the strings will lie in the same horizontal plane; and it is a well-known fact that when the strings lie in varying horizontal planes the action of the hammers thereon also varies in proportion as these planes vary, thus causing the piano to emit faulty tones. In practice this is one of the most difficult parts of piano construction and requires great skill and expense to produce such accuracy as will satisfy the trained ear of an expert musician, and, further, it is a recognized fact that even though the piano be perfectly constructed as to the lying of the strings in the same horizontal plane many causes militate against the maintaining of this accuracy, such as the shrinkage of the material of which the piano is constructed, the loosening of the threads which secure the plugs in their bearings, and the wear between the strings and their bearings.

The object of my invention is to overcome these difficulties and so provide for the supporting of the strings as to insure their lying in the same horizontal plane at all times, and also to improve the sound emitted therefrom by the forming of the sound-sustaining cavity, which in cross-section is of cupola shape, which shape is best adapted for the reverberation of sound; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may under-

stand how to make and use the same, I will describe its construction and operation in detail, referring by letter to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a plan view of a portion of a grand piano, showing my improvement applied thereto; and Fig. 2 is a detailed section of the sounding-board, strings, and sound-sustaining device.

Referring to the drawings, A represents a sounding-board, B the bridge, and C the tuning-keys, all of the usual construction. Formed with the cross-bars D are the sound-sustaining bearings E, which in cross-section are of cupola shape, having a number of holes F through the upper portion thereof to permit the escape of the sound produced by the vibrations of the strings. The strings G are stretched in the usual manner and pass under the sound-sustaining bearings and bear against the under edge of the front ledge, which latter is somewhat longer than the rear ledge, in order that the strings may have but one point of contact.

The hammers H strike the strings immediately below the sound-sustaining bearings E, and the peculiar shape of this bearing will intensify the sound emitted from the strings, as before described. As the bearings E are made in lengths sufficient to accommodate all of the strings upon each section of the sounding-board, it will be seen that the only accuracy required to cause each string to lie in the same horizontal plane is that the lower edge of this bearing be made perfectly straight, which is a matter of easy accomplishment.

Another advantage gained by my improvement is that as all of the strings lie upon one straight edge they are easily adjusted relative to each other in order that their parallelism may be maintained, and should it at any time be disturbed may be readjusted by tapping one or the other of the strings sidewise. This permits the truing of the strings relative to the tread of the hammers, which is of great importance in finely-adjusted pianos.

Incidentally the cost of constructing the string mechanism of a piano is lessened by my improvement, in that fewer parts are required for the bearings of the strings, and these are more readily replaced in position

and do not require the great accuracy necessary to adjust the bearings usually employed.

Having thus fully described my invention, what I claim as new and useful is—

- 5 1. In combination with the sounding-board and strings of a piano, a sound-sustaining bearing of cupola shape in cross-section adapted to hold the strings in horizontal alignment, as specified.
- 10 2. In combination with a piano and the striking mechanism thereof, a sound-sustaining bearing of cupola shape in cross-section having a straight edge in a lower horizontal plane than the remainder thereof, against

which the strings bear, and by which they are 15
held in horizontal alinement, said bearing having holes formed through its upper side to permit the free circulation of the sound from the strings, substantially as shown and described. 20

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JULIUS SCHNORR.

Witnesses:

S. S. WILLIAMSON,
MARK BUFORD.