(Model.)

H. C. RICHARDS.

STRINGING PIANOS.

No. 280,953. Patented July 10, 1883.

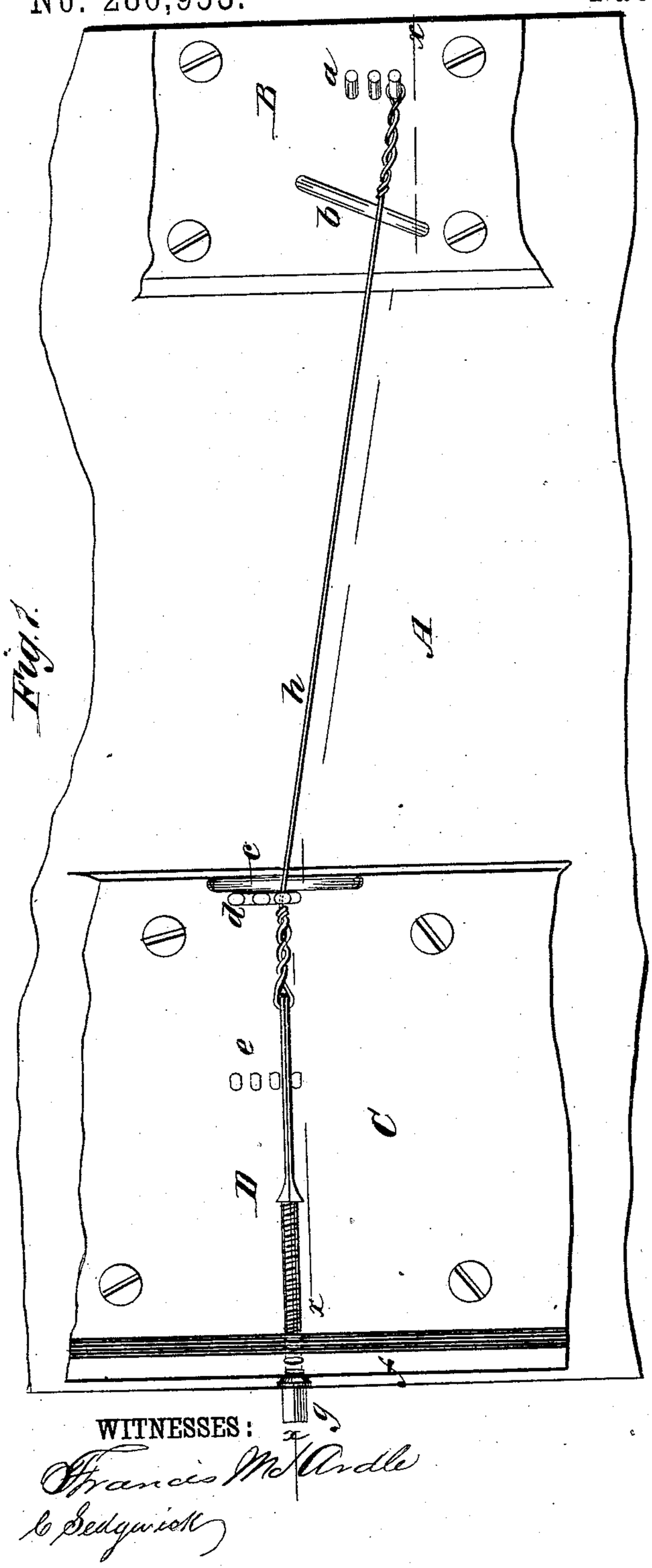

Fig. 1.

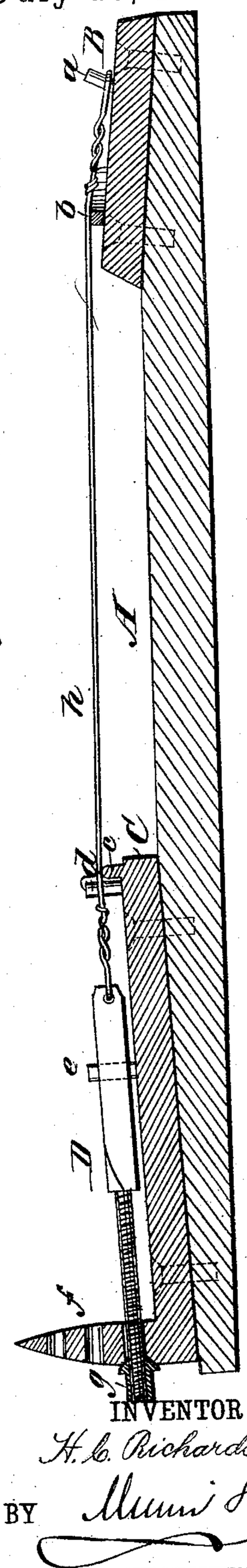

Fig. 2.

WITNESSES:

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HENRY C. RICHARDS, OF CINCINNATI, OHIO.

STRINGING PIANOS.

SPECIFICATION forming part of Letters Patent No. 280,953, dated July 10, 1883.

Application filed August 14, 1882. (Model.)

To all whom it may concern:

Be it known that I, HENRY C. RICHARDS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Stringing-Bar for Pianos and other Musical Instruments, of which the following is a full, clear, and exact description.

In pianos as usually constructed the strings are fastened at one end to a metal plate by means of a hitch-pin, and at the other end are wound around a tuning-pin or windlass which is sustained in a wooden support, so that the strings, being fastened to metal at one end only, are more or less affected by changes of the atmosphere acting upon the wood, and the steel pin, which is purposely made rough, soon wears itself loose in the wood.

The object of this invention is to obtain metallic fastenings at both ends of the string, and also to connect the strings by means of devices which allow them to be tuned with great facility.

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 both the figures.

Figure 1 is a plan view, showing my improved device as applied to a piano-string; and Fig. 2, a sectional side elevation on line *x x* of Fig. 1.

A is the usual sounding-board or top of the sounding-chest.

B is the usual metal plate, provided with pins *a* for connection with the strings, and a bridge, *b*, over which the strings pass.

C is a metal plate, attached to the board A at the place where the pins or windlasses are usually applied, and this plate will extend beneath all the strings of the instrument. The plate C is provided with a bridge, *c*, and guide-pins *d* for the strings.

D is the stringing-bar, which is formed of metal flattened at one end to pass between the guide-pins *e*, and screw-threaded at its outer end, which extends through a flange, *f*, formed on the plate C. Upon the screw-threaded end of the bar D is a nut, *g*, which takes upon the outer side of the flange *f*. The inner end of the bar D is apertured to receive the end of the string *h*. It will be understood that one of the bars D is to be applied in connection with each string, and that by turning the nut *g* on each bar the strings will be drawn tight, and the action will be in a direct line, or nearly so, of the string. It will also be seen that the string has metallic fastenings at each end, so that there is no possibility of variation from a wet or dry condition of the atmosphere.

As will appear from Fig. 2, I make the bore of the flange *f* for the passage of the screw larger than the screw, and countersink the bore next the nut *g*, having a beveled head to fit the countersink of the flange, which arrangement holds the string-bar D out of direct contact with the flange to avoid jar, which would impair the clearness of tone.

It will be understood that this improvement is not limited in its application to pianos, but may, with suitable modification, be applied to other stringed instruments. Neither do I limit myself to the precise arrangement of string-bar D, herein shown and described, as the same may be modified within the scope of my invention—for instance, the string may be fastened at one end in a swiveled eye-piece at the inner end of bar D, which may be screw-threaded into a projection of plate C, to be turned bodily in the plate and eye-piece for tuning the string, instead of moving the bar by a nut, as shown and above described.

The advantages of this device are as follows: The strings being fastened at each end by metal, there is less liability of their getting out of tune; the piano or other musical instrument can be readily tuned, and the screw permits perfection in turning. The device occupies less room than the ordinary devices, thereby allowing a sound-chest of greater capacity, and it is much more durable than the ordinary devices.

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

1. In pianos and other stringed instruments, the combination, with the string *h*, of the stringing-bar D, provided with the bevel-headed nut *g*, and the metal plate C, having the bored flange *f* and guide-pins *e*, substantially as shown and described, whereby the string may be tightened or loosened for tuning the instrument and metallic support be given to the string, as specified.

2. The plate C, having a bore in its flange *f* larger than the string-bar, and countersunk to receive the bevel-headed nut *g*, to hold the string-bar out of contact with the flange or plate, substantially as and for the purpose set forth.

HENRY C. RICHARDS.

Witnesses:
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