

(No Model.)

M. SCHLITTENBAUER.
TUNING INSTRUMENT.

No. 467,203.

Patented Jan. 19, 1892.

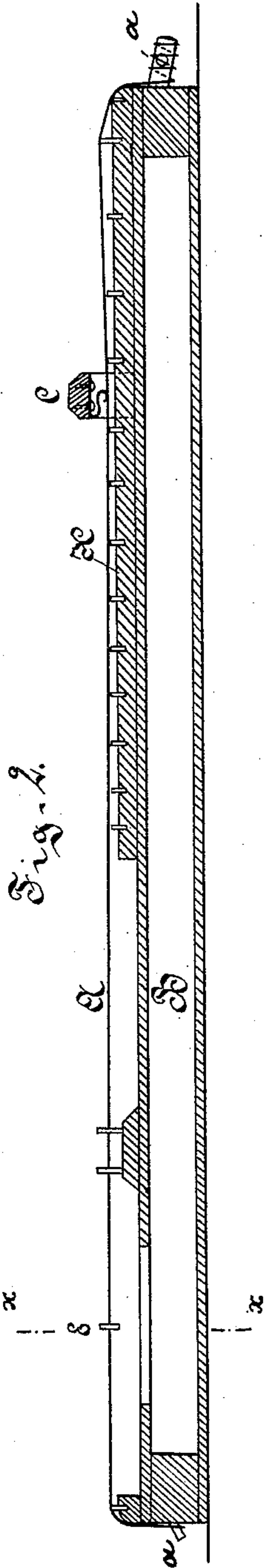


Fig. 2.

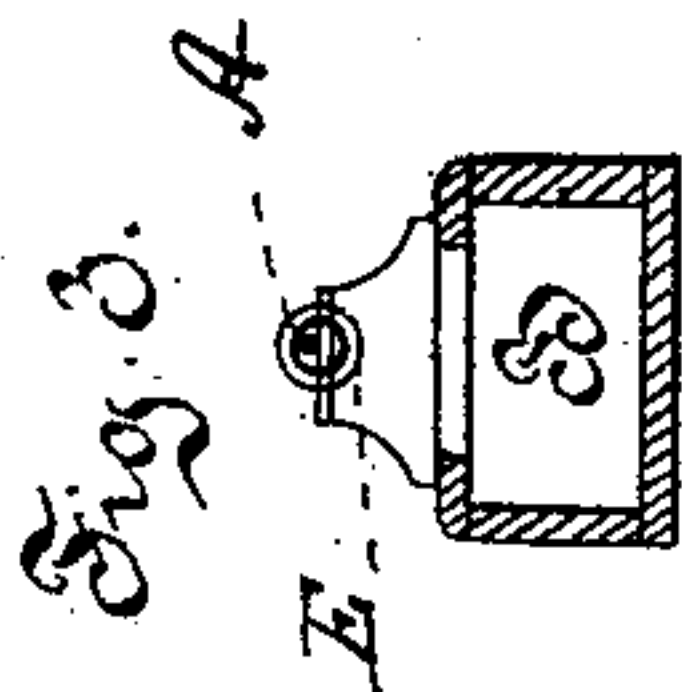


Fig. 3. A

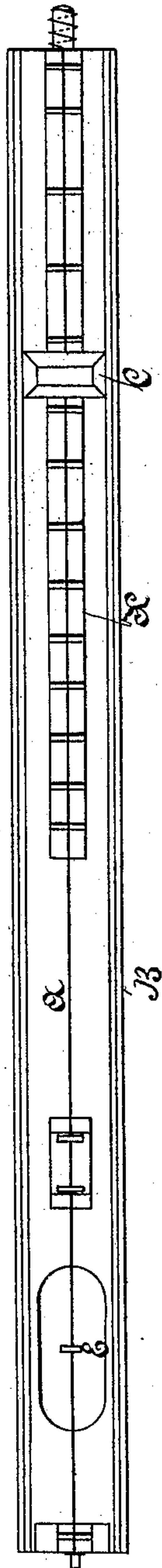


Fig. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

MAX SCHLITTENBAUER, OF MUNICH, GERMANY.

TUNING-INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 467,203, dated January 19, 1892.

Application filed June 26, 1891. Serial No. 397,585. (No model.)

To all whom it may concern:

Be it known that I, MAX SCHLITTENBAUER, a resident of Munich, Bavaria, Germany, have invented certain new and useful Improvements in Apparatus for Tuning Stringed Musical Instruments, of which the following is a specification.

This invention relates to an apparatus by which not only experts but also unskilled persons can readily tune stringed musical instruments. The apparatus is so constructed that it will visibly demonstrate to the tuner when the proper pitch has been obtained.

The invention consists in the various features of improvement more fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a top view of my improved apparatus; Fig. 2, a vertical longitudinal section thereof; and Fig. 3, a cross-section on line *xx*, Fig. 2.

The letter B represents a sounding-board on which there is stretched a string A between suitable pins *aa*. Beneath part of the string A there is secured to the sounding-board a scale H, over which travels a slide C, that engages string A. As the slide is moved to any one of the subdivisions of the scale, the string is tuned to a given pitch. Upon the free end of the string A there is placed a ring E, which is free to vibrate.

In use the apparatus is placed upon the

sounding-board of the instrument to be tuned, say of a zither. If, for example, the string *g* of the zither is to be tuned, the slide C is moved along the scale to impart such pitch to the string A. The string on the zither is now manipulated by means of the tuning-pin in the ordinary manner. As soon as such string has acquired the proper pitch *g* and is sounded, the ring E will at once begin to move or dance rapidly by oscillating or revolving on its string. Thus the ring will demonstrate ocularly when the instrument has been properly tuned.

What I claim is—

1. In a tuning apparatus, the combination of a sounding-board B, with a string A, stretched thereon, and a ring E, embracing the string, substantially as specified.

2. The combination of sounding-board B, with string A, stretched thereon, a scale H on the sounding-board, a slide C, engaging the string, and a ring E, embracing the string, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

MAX SCHLITTENBAUER.

Witnesses:

H. NICKEL,
KARL MAYER.