

No. 788,484.

PATENTED APR. 25, 1905.

G. F. LYON.
MUSICAL INSTRUMENT.
APPLICATION FILED AUG. 31, 1904.

Fig. 1.



Fig. 2.

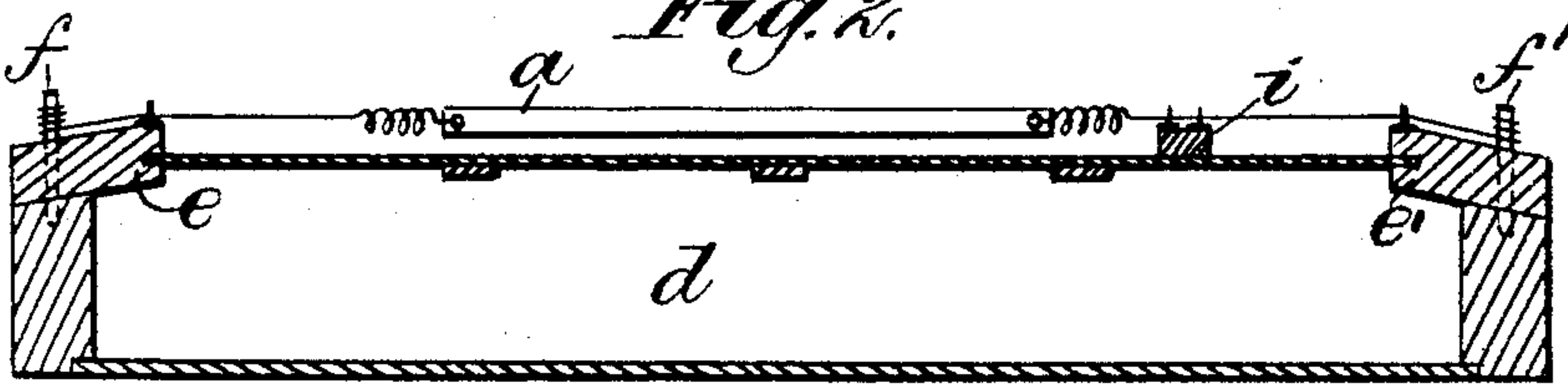
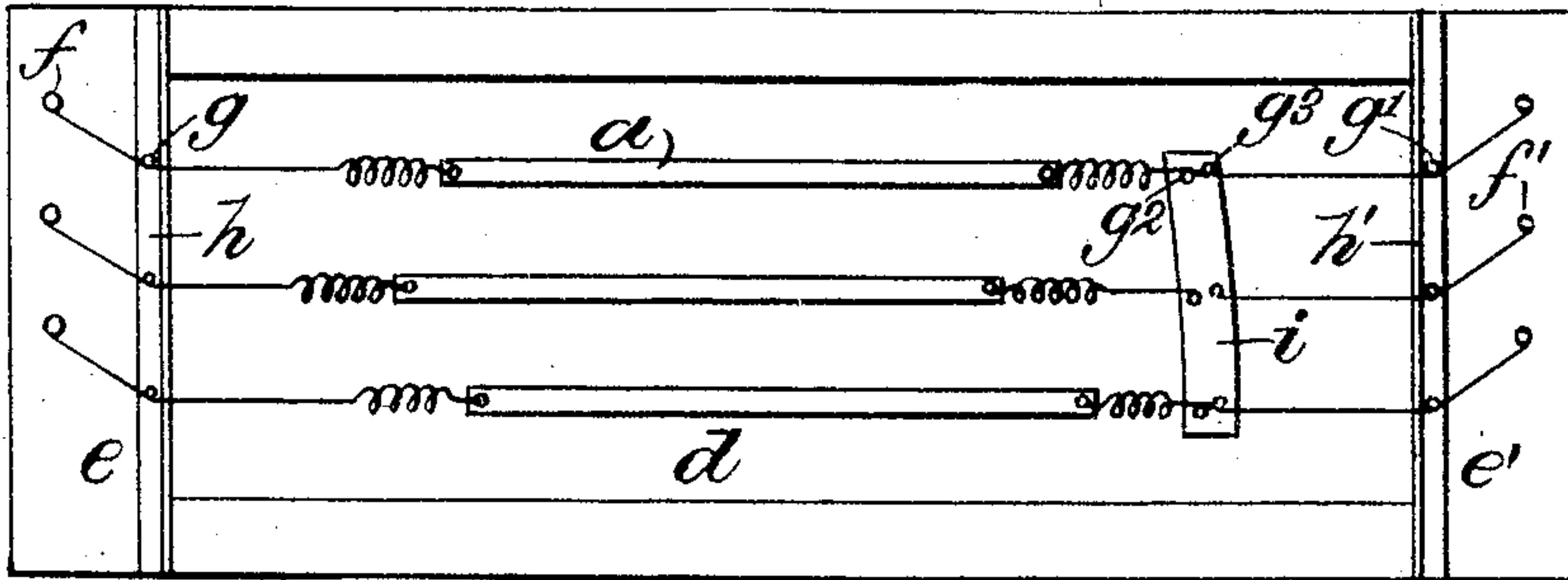


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

GUSTAVE FRANTZ LYON, OF PARIS, FRANCE.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 788,484, dated April 25, 1905.

Application filed August 31, 1904. Serial No. 222,883.

To all whom it may concern:

Be it known that I, GUSTAVE FRANTZ LYON, engineer, a citizen of the French Republic, residing at Paris, France, have invented certain new and useful Improvements in Musical Instruments, of which the following is a specification.

This invention has for its object to provide an improved sonorous body for string instruments acted by percussion or by other convenient means and also to provide a new musical instrument in which such sonorous bodies are used and which can be substituted for timbals, dulcimers, bells, triangles, and the like musical instruments, or the said sonorous bodies can be combined with such instruments and new effects be obtained therefrom.

In the accompanying drawings, Figure 1 shows a sonorous body according to this invention. Fig. 2 is in section a musical instrument provided with such sonorous bodies. Fig. 3 is a plane view of Fig. 2.

The new sonorous body comprises a vibrating part *a*, constituted either of a spun cord or a blade or a massive rod or a tube of metal, wood, or any other suitable material, the cross-section being either constant or variable throughout its length and the said vibrating part being provided at each of its ends with strong springs *b b'*, to which are attached tuning cords or wires *c c'*. The said vibrating bodies thus arranged or constructed emit when struck a peculiar grave or low sound, and in addition thereto various acute or high sounds, due apparently to the longitudinal vibrations of the whole arrangement caused by the elastic energy stored by the tension of the springs. These sonorous bodies can be applied generally to stringed or percussion instruments, and they present the great advantage of emitting very grave or low sounds with a comparatively short length of vibrating part, and they are very readily tuned by stretching. Figs. 2 and 3 show, for instance, a musical instrument for the application of the sonorous bodies hereinbefore described. The sonorous bodies *a* can be mounted on a sounding-board over a sounding-chest *d*, the transverse boards *e e'*, at the ends thereof, carrying the tuning-pegs *f f'*. The ends of the tuning cords or wires *c c'* are fixed to the pegs *f f'* and are guided by pins or guides *g g'*,

attached to the nuts *h h'* on the aforesaid transverse boards *e e'* and also by pins or guides *g² g³*, fixed to a bridge-piece *i*, over which the said tuning cords or wires *c c'* pass. The sonorous bodies having been tuned by operating the pegs are caused to vibrate by striking either the body part *a* or the springs *b b'*.

The instrument may comprise as many vibrating bodies as may be desired, and with the arrangement according to my invention new and varied effects can be obtained, which can be utilized in orchestras in substitution for or in combination with timbals, dulcimers, and the like instruments.

The sonorous bodies may be mounted parallel or transversely to the length of the sounding-board or at any desired angle thereto. The sounding-board may be of wood or sheet metal or of plates of any suitable shape—such, for instance, as the dished form known as “Belleville” springs or the like.

Having thus described and ascertained the nature of my invention and in what manner the same may be performed, I declare that what I claim is—

1. A musical instrument having a sounding-board, a sonorous member composed of a sound-emitting portion, and springs connected with the opposite ends of said sound-emitting portion and extending oppositely therefrom, wires connected with the springs, bridges on the sounding-board over which said wires extend, and tuning devices connected with the wires.

2. A musical instrument having a hollow body provided with a sounding-board, a sonorous member composed of a sound-emitting portion, and springs connected with the opposite ends of said sound-emitting portion and extending oppositely therefrom, wires connected with and extending away from the springs, bridges on the hollow body over which the wires extend, and tuning-pins on the body connected with said wires.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GUSTAVE FRANTZ LYON.

Witnesses:

HANSON C. COXE,
PIERRE L. LEISE