

**THE PIANOFORTE AND ITS
ACOUSTIC PROPERTIES, SECOND
EDITION, REVISED AND
ENLARGED, TRANSLATED FROM
THE GERMAN**

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SIEGFRIED HANSING & EMMY HANSING-PERZINA

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Siegfried Hansing

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BY
SIEGFRIED HANSING

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BY
EMMY HANSING-PERZINA.

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Preface.

Ten years have elapsed since I wrote the preface to the German edition of this book in May 1888. During those years I continued my researches and investigations for a farther completion of practical instructions for the piano in its acoustic part, and therefore this edition has been enriched by much that is worthy of knowledge, both practically and theoretically.

The science of acoustics has ever won my attention, for the reason that I deem it the substance of all acoustic properties in piano building, and therefore it partly fills this book. The conviction has gained upon me, that the views expressed in the most acoustic dissertations are directly opposed to true facts and conditions. Treatise of mine, against the unnatural in the science of acoustics, have appeared from time to time in German as well as in English papers, and have greatly tended to uproot the old structure of the science. Though some few, still sustain the decaying edifice, sufficient material has been collected from various sides to build a new one corresponding to rational views. In this book then, I feel myself particularly inclined to bring to light and correct, as far as it is within my power, the erroneous views which being shared by the majority of piano makers have caused much harm to the acoustic construction of the piano. I have come to the conclusion that no one will succeed in making the invisible workings of a sounding body

intelligible to the majority of piano makers for the reason that they have not learned to follow facts with the mental vision. The mental vision is capable of giving us a nicer sense of feeling and thus enables us to cope with the invisible. In practice, we are partially helped over the difficulties that arise in the study of the piano in its acoustic properties, by the mental vision. The sense of feeling can only be developed in the piano maker by enriching his mind with a knowledge and understanding of the nature of acoustics.

The study of music properly initiates its students only then when, together with the acquiring of technic, it arouses their souls by implanting in their minds a knowledge and conception of the tonal art. For piano makers also, there is such a study:— it is the science of acoustics. The early violin-makers pursued the study of acoustics after their fashion and they possessed a wonderful understanding of the undulations and vibrations of their instruments. All the old masters have probably passed through trying periods, in which they sought, by means of experiments, to further instruct themselves and increase their knowledge. They learned closely to observe and discriminate, gleaning from nature a definite method according to which they regulated their instruments. They must have understood the nature of their instruments thoroughly, being unable, however, to find scientific names to express the results of their experiments. Through untiring research and persistent experiments, they acquired and developed an acute sense of feeling and mental perception, which was of great assistance to them in their work and which is evidenced today by the instruments preserved to us. Not a prescribed measuring of surface with a compasses, nor yet a copy of a model, guaranties the complete success of an instrument, but the sense of feeling must render material aid, since only he,

who, beside practice, has acquired a scientific knowledge of the nature of the instrument, can produce anything extraordinary. To this end I have found some special treasures of instruction and knowledge in the descriptions of experiments &c., contained in treatise on acoustics and other similar works. I am of the opinion that these treasures, to be applicable to the piano, must be at the command of an experienced piano maker, who is well versed in every branch of this trade. I disclose in the following work, the treasures which I have found during thirty years of experience as a pianobuilder, for the benefit of the piano, the pianobuilder, as well as for all those interested in acoustics in general and particularly for those who are interested in acoustics of the pianoforte.

March 1898.

Siegfried Hansing.

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