SOUND EXPERIMENTS

A New and Fascinating Play
FOR BOYS

BY
ALFRED C. GILBERT

Published by
THE A. C. GILBERT COMPANY
NEW HAVEN, CONN.

Yale University, 1900

New York Chicago San Francisco Toronto London
TABLE OF CONTENTS

INTRODUCTION

I. "TO AND FROM" MOTION

II. ORIGIN OF SOUND

III. TRANSMISSION OF SOUND

IV. TRANSMISSION OF SOUND—Continued

V. INTENSITY, PITCH AND QUALITY

VI. THE CAUSATION OF SOUND

NEW HAVEN: CONN.
BY A. C. CILMER
CONTRARY 1920
and this.

Many unknown scientific and mechanical wonders of our earth
are problems in their more intimate and less obvious aspect.

INTRODUCTION
Motion: To and Fro

Chapter I

Sound Experiments

GILBERT
A vertical position of point No. 2 becomes unstable due to gravity's influence if the pendulum's bob is too far from the center of rotation. The bob to rest at a point as near to the center of rotation as possible will result in minimal force being exerted by the bob on its support. If the pendulum is not kept swinging, the motion will eventually cease. The pendulum's bob is most rapid at the center of rotation. This means that the pendulum's bob is moving with the greatest speed at the center of rotation. The bob will swing back and forth, and the pendulum's bob is most rapid at the center of rotation.

**METEOR OF THE PENDULUM & THINGS TO KNOW AND NOTICE ABOUT THE MOVEMENT**

The period of oscillation is the time required to make a single oscillation of the pendulum. The farther the pendulum is from the center of rotation, the longer it takes to complete one cycle. The pendulum's bob is most rapid at the center of rotation. The bob will swing back and forth, and the pendulum's bob is most rapid at the center of rotation.

**THE PENDULUM**

Without sound waves, all results of this to and fro motion would carry the right message, and the telephone, telegraph, and sound waves we see about us and the sounds that come to our ears and the Bose environment that are all the result of these motions that we go along with our experiments with all of these motions that are not right-side-up have the same effect on the pendulum. What is the effect of the wind upon the tree? Do we not hear the wind's howl as it moves through the branches? The tree's branches are not only affected by the wind, but also by the pendulum's bob. The pendulum's bob is most rapid at the center of rotation. The bob will swing back and forth, and the pendulum's bob is most rapid at the center of rotation.

Now do a little other stuff on your own. You can make a pendulum out of a piece of wood and a small weight. The bob will swing back and forth, and the pendulum's bob is most rapid at the center of rotation. The bob will swing back and forth, and the pendulum's bob is most rapid at the center of rotation.
The vibrations would be in the same time—
make any difference whether the weight was large or small—
experiment on a second (where there is no air), it would not
exert any force on the pendulum, and if you could try this
out by holding the pendulum in your hand, you would see
no influence on the stoppage of the pendulum. Consequently,
if the weight is light, there would be more friction and
air resistance than if the weight is heavy.

Special Note: We did you the fiction of the air, had an
influence in the stoppage of the pendulum. Consequently,
if the weight is light, there would be more friction and
air resistance than if the weight is heavy.

The principles that we have just illustrated with the pendulum
are the same as those that will be applied in this experiment.

Experiment No. 2. Take a watch and count the number of
vibrations. That is what Galileo discovered hundreds of years
ago. He found that the shorter the pendulum, the more rapidly it vibrates.

Galileo Sound Experiments

C H A P T E R
Now what you do is to set the table in vibration by very slight
little bottle to produce a sound. By force of their thought (?) you will cause the
little bottle to produce a sound. Now what you do is to set the table in vibration by very slight

Concentration of Thought to Produce Sound

My hypothesis which I will explain to you is this: When you are using this instrument
and you are thinking of a word (or whatever), the vibrations of your thinking will
cause the pendulum to start moving. The movement of the pendulum will then be
seen by the observer. If you can concentrate your thoughts on the pendulum, you will
be able to influence its movement. This is a simple and effective way to demonstrate
the power of thought.