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Chapter **1**

HISTORY OF THE TUBA AND RELATED INSTRUMENTS

According to eminent musicologist Curt Sachs, all wind instruments are correctly classified as aerophones. Simply stated, an aerophone is a tube or pipe (either open or closed) enclosing a column of air and acting as a sound resonator. All brass instruments, including the tuba family, are lip-vibrated aerophones. This term thus identifies those musical instruments that produce sound when players project air through their lips, causing them to vibrate into a cup-shaped mouthpiece that channels the vibrating air stream into the pipe or tube. In combination, the length of tube, tension of the lips, and speed and direction of the air stream determine the pitch produced.

It is interesting to note that instruments of the brass family are not classified together because they are fabricated from a common metal or alloy but because they all produce sounds by vibrating lips into a cup-shaped mouthpiece. This factor establishes brass instruments as the most “physical” of wind instruments.

All brass instruments are designated as having a cylindrical or a conical bore. Cylindrical instruments maintain consistent bore size throughout the major portion of their length with a slight taper in the leadpipe section and a major taper in the bell section as it flares to form the bell. Cylindrical instruments have a characteristic brilliant tone quality (this group includes trumpets and trombones). Conical bore instruments have a gradual taper for the major portion of their length, including the leadpipe and bell sections, and have cylindrical tubing through the valve section (including attached tubing and crooks for ease in tuning each valve). Some conical instruments, both historic and modern, maintain a degree of conical taper through the